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Management of the Hypertonic Period of Early Infancy*

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There are certain features of the infant's first three to six weeks which justify the designation of that time of life as a hypertonic period. These manifestations are suggested in many infants and should be regarded as reactions to common environmental influence. While they may be seen during the newly born period, they may be present any time within the early months. The physician is called upon to treat the following three clinical conditions common in this period:

1. "Colic" of early infancy.
2. Cutaneous exudative tendencies.
3. Feeding disturbance with pylorospasm.

I wish to discuss these briefly and to make suggestions for their management and treatment.

1. *Colic of Early Infancy.* Young infants often react to the new environment of the outside world by evidences of excessive and unexplained crying, sleeplessness and motor unrest. This clinical condition has come to be known as colic, a term which has the disadvantage of applying specifically to intestinal and abdominal pain. I feel sure that the disturbance should be interpreted as the response to excitement by a young infant in whose organism inhibitions are as yet undeveloped. The brain and central nervous system are fresh and plastic. Experiences are beginning to be recorded on the impressionable cells which are as active as the newest full-charged battery. Joseph Brennemann, with his gift for apt description, states in his recent work, the Encyclopedia of Pediatrics, that he has felt that the human infant is born somewhat "underdone."

Have you ever noticed that the visits of the young infant to your office will be accompanied by paroxysms of screaming? This is not due to the sudden development of colic or intestinal pain. I doubt that we have any proof that the well-fed normal young infant is suffering from pain during such paroxysms. These attacks may occur at home, but especially when the infant is disturbed greatly. If you think that he is not affected by conditions in his surroundings try the effect of elevating your voice suddenly; abruptly lifting the child while flexing the head and thighs forward; slamming the door; slapping the side of the crib. You will see the immediate movements of the arms and legs, which has been called the "startle-reflex."

The Startle-Reflex of Moro[1]. At about the sixth day of life a phenomenon may be elicited by striking the infant's bed with one's hand. Instantly there is a response due to startling, likened to an "embrace reaction," in which the infant spreads his arms, then brings them together in a bowed position, sometimes with a clonic vibration

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of the forearms. The legs are also included in this body startle-reflex. At about one month of age this reaction is at its maximum, but in many infants it still may be brought out for several months. Crying may accompany the disturbance which is evidently a manifestation of startling or frightening. The pattern[2] of the reaction may undergo some changes.

Interpretation of Colic in Early Infancy. Paroxysms of severe crying are produced by frightening, and can well be due to the same mechanism that produces the body-startle-reflex. This early evidence of hypertonus corresponds to the period in which the Moro reaction is present. There is another reflex of early infancy known as the suspension-grasp reaction which may be accompanied by crying. This behavior trait is remarkable in the ability of the infant to grasp a small rod with the fingers of one hand and hold it sufficiently tight that he may be lifted for a few seconds. This might also be regarded as a manifestation of an increased nerve and muscle tonus.

The appearance of restlessness and of outbursts of screaming usually begins in the third or fourth week. This greatly disturbs the mother, who becomes much worried because of her inability to quiet the baby. When the infant cries, there is a similar emotional response from the mother. In the management of the mother and child I believe that the attendants, whether physician, nurse or member of the family, should appreciate the fact that the mother at this period is in a state of emotional imbalance or exhaustion.

The effect of the infant's immoderate crying is to interfere with rest and sleep, the appetite, the milk production, and even the judgment of the mother who believes that the infant is hungry all the time; that she is unable to supply enough food, and that she is therefore a poor mother. She concludes that her milk must be poor in quality, affected by her nervousness. The whole household becomes likewise concerned.

So, changes are made in the intervals of nursing, formulae are begun, laxatives are given to the infant, household remedies are tried—all efforts are without avail. The infant is constantly kept agitated by such methods as carrying, shaking, rocking, passing to various members of the family. The long drawn-out daily bath is accompanied by steady crying of the infant. The average home has much noise and confusion, and this helps prevent the infant from sleeping in the late afternoon and the first half of the night.

The physician is perplexed because of his failure to suggest successful methods for quieting the child. He decides in extreme cases that the infant be taken to the hospital. Conditions there are usually bettered, for the nurses are too busy to pay much attention to the infant which is fed, put down in its bed, and let alone.

It is common for families of physicians, of graduate nurses, of college professors, and of higher social levels to furnish many of the cases of hypertonic infants. Recently I talked on this subject in a nearby city and a colored physician told me that he had utilized my advice with good results. I answered that I had not known that "colic" bothered colored infants, but I suggested that the explanation might be in the fact that his wife probably belonged to the intelligentsia. "Yes," he said, "I guess she does belong. My wife has two college degrees."

Management of Environmental Conditions. From what has been stated regarding the exciting cause, it is obvious that conditions in the home must be changed from commotion to complete quiet. Instead of a complex program the schedule should be simple. The number of attendants should be limited to a few who comprehend what is needed, usually the mother and father.

Hours of rest will be increased if the intervals between feedings be lengthened. Breast feeding, complemental feeding, a dietary adequate in food factors and vitamins—when such are given it will rarely be necessary to make radical changes.

Management of Medicinal Treatment. Sedatives are indicated at regular intervals for several days. If relapses of crying occur, the dose may be increased at the time of day when most needed. The drugs which have proved successful and their

dosage for the age levels in early infancy are as follows:

Age in Weeks	Phenobarb. Sol.	Atropine Sulf.	Codein Sulf.	Paregoric
2	gr. 1/6	gr. 1/2000	gr. 1/20	gtt. 10
4	gr. 1/5	gr. 1/1500	gr. 1/15	gtt. 15
8	gr. 1/4	gr. 1/1200	gr. 1/12	gtt. 20
12-20	gr. 1/3	gr. 1/1000	gr. 1/10	gtt. 25

The desired dose may be added to any syrup as a vehicle, and given in half or full teaspoonful. It should be administered regularly, before each feeding. After a day or two of comfort the dose may be reduced or if it is still difficult to quiet the infant the dose may be continued or increased.

Phenobarbital soluble is nearly always effective, if not it may be advisable to try one of the other sedatives. Atropine and codein may be given together in a vehicle in case either alone does not produce rest. Paregoric seems to be helpful in an emergency and may be made to have a less objectionable taste and appearance by embodying it in a prescription rather than in water.

2. *Exudative Cutaneous Tendencies.* — From the day of birth skin lesions of various types and degrees are common upon the infant, indicating the vulnerability and tendency to exudation. Although during the entire period of infancy the skin is easily inflamed, it is more sensitive in the early months, reacting in as vigorous a way to irritants as does the cerebral behavior to environmental irritation.

Physiological erythema is a simple manifestation of the neonatal days which appears promptly, sometimes with mild desquamation. Some infants have a toxic erythema which is probably a variety of physiological erythema, characterized by small areas of reddened skin the center of which is surmounted by a blanched papule resembling a tiny urticarial lesion. Erythema of the newborn is without clinical importance, except for the apparently severe itching. If the child's hands are free the face will be severely scratched and excoriated, or if the child lies upon its abdomen the face will be violently rubbed against the bedclothes. In our nursery the attendants are in the habit of restraining the infant who shows this tendency. This is done by elbow splints and a thin voile mask over the face.

(a) *Intertrigo*[3]. A lesion of importance, very common in the newborn is intertrigo, which may occur in many regions of the body. It is often due to "scalding" from frequent loose acid stools. This may occur any time in early infancy, if the soiled diaper be retained any length of time. Highly acid urine sometimes causes a similar dermatitis during the newly born period. It is the retention of the soiled wet diaper that usually causes the intertrigo. For treatment the newly born infant is placed in the knee-chest position, all diapers are discarded and the skin kept clean and dry.

For some unexplained reason ammoniacal decomposition of the urine in the diaper does not occur in the newly born period; and almost never in infants fed on breast milk alone. It comes in the early months with artificial feeding of large amounts of cow's milk. It is a result of urea-splitting of the voided urine in the warm moist diaper through bacterial contamination. Such ammonia burns from urine should not occur with hygienic care and with proper laundering of the infant's clothes and sheets. It is advisable to reduce the amount of cow's milk during such periods, if it be large.

Predisposed sites for intertrigo are the convex elevations of the body surfaces such as the buttocks, nates, the vulva, and labiae, the prepuce, meatus and scrotum which become inflamed from protracted contact with moist soiled clothes. The chin, tip of nose, prominence of cheeks all show rapid inflamnatory lesions from such exposure to dampness such as saliva and regurgigated food. Moisture which persists upon the face of the young infant is the cause of most instances of erythema or rashes. The face stays wet by finger-sucking, or contact with mother's wet nipple and breast; also from leakage from bottle, perspiration, delay in cleansing or drying the skin. Cleanliness, dryness and ventilation are the factors in prevention or cure. Excessive amount of clothing especially of heavy material producing overheating, sweating and restlessness have much to do with exudative manifestations in infants.

(b) *Eczema of Early Infancy.* Eczema is often preceded or accompanied by mani-

festations of restlessness, immoderate crying, constipation or diarrhea. The infant loses sleep, is uncomfortable at all times. Early infancy is especially susceptible. I have purposely placed the discussion of eczema with that of intertrigo. Both develop in the well-fed infant, sometimes lacking in hygiene and favored by moist, uncleanly environment. Facial eczema in the young infant occurs as a mask on the convex surfaces similar to the sites of intertrigo; also in the bend of the elbow and the knee, where the moist warm surfaces away from air and evaporation permit a sodden state of the skin.

The infant becomes almost frantic from the intolerable itching so that, by scratching, the skin surface is traumatized. The erythema and small papular eruption may be changed into a moist denuded surface.

The Prevention of Eczema in the Young Infant. The relief of the restlessness and frantic traumatizing of the skin is best accomplished by (1) sedatives; (2) immobilization of the hands and arms; (3) the wearing of a light mask or hood; the disease may be prevented, checked or cured if treatment is begun in this way. The hypertonic infant is the potential eczematous subject.

It has been the custom in most obstetrical nurseries to feed the newly born infant skimmed or other cow's milk for several days while awaiting the establishment of milk in the mother's breast. Very few infants in private hospital nurseries are fed breast milk alone and sooner or later infants get on cow's milk exclusively. Raw cow's milk is more apt to sensitize the child than is well boiled milk; even the boiling of evaporated milk should be practiced. For two years the evaporated milk used in our feeding cases in the nursery has been boiled for ten minutes. If there be a reasonable expectation that the mother can nurse the baby, cow's milk should not be started in the nursery but a sugar solution may be used to supplement the breast feeding.

The attempt should not be made to feed over-amounts of cow's milk simply for the purpose of rapid gain. The history of the feeding in infants who have acquired eczema is one of an over-abundant dietary whether on the breast or bottle. I have seen numerous cases of eczema occur when the quantity of cow's milk has been increased. Therefore sensitization may be quantitative in origin. Babies have gotten as much as 30 ounces of actual milk daily; have gained above the average weight and the bowels have been disturbed either by diarrhea in breast milk feeding or obstinate constipation from too much casein and calcium in the cow's milk. Finally the infant becomes restless, uncomfortable; sometimes exhibits colic, and a rash appears as a milk crust of the scalp or as an eczema of the cheeks. Early scratching makes it become rapidly worse and it is at this time that prevention of traumatism by restraint with splints and a light voile hood is of the utmost benefit.

Local Treatment of Eczema. In the beginning a bath in bran water may be needed so as to soak off the crusts. The lesions may then be painted with tar-acetone-collodion mixture twice daily with a camel's hair brush. For a whole week this dressing is not removed. Tar is not used on the scalp or over pustules. The latter are drained, kept moist by application of boric acid packs.

Once each week the tar-acetone-collodion dressing is removed with acetone so that results may be observed. One should be sure to get a mild non-irritating preparation of crude coal tar; weaker mixtures of the tar are used in active inflammatory lesions, and stronger concentrations of tar are used in chronic eczema. The following proportions are suggested:

Rx Liquid Crude Coal Tar	gms	2	5	6-15
Acetone	cc	2	5	6-15
Flexible collodion	cc	30	50	90

There is a caution not to be forgotten as to the treatment of severe eczema. The mortality rate is high in severe cases of generalized eczema if the patient acquires intercurrent infection, such as upper respiratory disease. Most deaths occur in February, March and April. It would be better therefore in the winter or spring to treat the child as an outpatient rather than confining in a hospital ward.

Type of Diet in Eczema. In mild cases

one may continue milk but reduce the amount, adding other foods to take the place.

In severe cases, determine the questions as to whether the eczema is being kept active by irritation from a food to which the child is sensitive; whether the eczema persists because of excessive clothes or bedcovers; whether there is irritation from secretions such as sweat or urination. In nearly every case traumatizing by scratching is the principal cause of exacerbation or chronicity.

Substitute Feeding. It should not be necessary to wean a child from the breast for eczema. A reduction in amount if overfed, or if insufficient the addition of other foods should be undertaken. Soy bean flour makes a good substitute for cow's milk. It is much similar to milk in its food factors but slightly deficient in carbohydrate. Soy bean milk is used commonly in Asia as the routine artificial bottle feeding. It even contains enough antiscorbutic so that scurvy rarely exists.

		1 pint	1 quart
Rx Soy Bean flour[4]	Tablespoons	12	24
Water	Ounces	16	32
Sugar or syrup	Tablespoons	1 to 2	2 to 4

Feed with bottle or spoon in similar quantities to milk.

We have not found permanent benefit from feeding goat's milk. Simply changing the species of animal milk would give only temporary relief, as the child soon acquires sensitization to the casein or lactalbumin.

Most eczema gets well or becomes quiescent when excessive amount of milk is discontinued; when additional foods are substituted for part of the milk; when the child is restrained for every minute of the day and night so that traumatization of the skin cannot occur; when a sedative such as phenobarbital soluble is given sufficiently to produce sleep and rest. The face and body must be dry. If clothing has been too heavy or irritating the skin may be made to return to normal more easily if exposed to warm air and drying.

(3) *Feeding Disturbance with Pylorospasm.* Occasionally one sees a young infant who has not gained well and has had a type of forcible vomiting suggestive of hypertrophic pyloric stenosis. Such infants have always cried frequently and even violently, have had poor appetite, have been immoderately restless. Their vomiting has been unexplainable for it occurred with all types of feeding. There may be evidence of hyperperistaltic waves. However the stools are not of the scanty hunger type seen in pyloric tumor obstruction. Barium given by the mouth passes the pylorus readily and normally. The child exhibits severe paroxysms of crying and may lie with retracted head and stiffened extremities during the screaming. The age incidence is different from that of pyloric tumor; it may begin in the newly born period or not till six weeks or more of age. The clinical picture is that of the hypertonic and neuropathic infant. An infant of eight weeks was sent into the hospital diagnosed as hypertrophic pyloric stenosis. We found however that his stomach emptied completely in three hours and that there were good stools though peristaltic waves were present. He did not require an operation.

The treatment is sedative, using atropine and codein, or phenobarbital. The dietary consists of milk incorporated in thick cereal such as oatmeal or farina, which makes a concentrated feeding, less easily vomited than ordinary milk mixture.

Conclusion

Three clinical peculiarities common in early infancy may be successfully managed by the methods suggested. Colic is a term which is inappropriate as the infant is restless and startled rather than suffering from pain. The tendency to certain skin lesions, to vomit easily because of pylorospasm at this same period of early life also are disturbances belonging to this same hypertonic period. In all three conditions sedatives are of the greatest value.

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3. Intertrigo literally means "rubbing between." It has usually been synonymous with the common word "chafing" such as so easily happens in flexor folds and between the thighs. The term is just as appropriate when used in connection with irritation or chafing of convex surfaces.

4. A commercial preparation readily obtainable is known as "Sobee." The mixture needs only to be brought to a boiling point.

Chairman's Address*

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As Chairman of the Obstetric-Pediatric Section of the Oklahoma State Medical Association, I welcome every one of you to this meeting, and ask that you each feel free to take part in the discussion of the papers presented. I am sure that you recognize that this section is unique in that it alone deals not only with the welfare of the individual patient, but also with the future welfare and progress of the nation. It is along this line that I would address you briefly this afternoon, in order that we may more clearly see our problems and our responsibilities, and perhaps, our possibilities.

When we realize that Oklahoma has its full share and more of the 150,000 American homes that are saddened and disrupted each year by the death of the mother or the new-born baby, or both; when we consider the vast number of children who are left motherless, and add to that, the other great group of mothers invalided by childbirth; then when we face the fact that this is our chosen field and that we, as physicians especially interested in obstetrics and pediatrics, have as our goal, a nation of living strong babies, and healthy mothers—we must admit that our gains in this direction, worthy as they are, have fallen far short of our ideals.

We shall hear during this session much of the story of the fight that the medical profession is making against the physical enemies of the mother and the baby, and we can thrill to the victories over the toxemias, tuberculosis, and syphilis. We still have far to go, and the road is a rough one, before we can see our losses brought to the irreducible minimum. We must consolidate our gains, refuse to falter in our preventive and educational program, and press on to extend our field of influence, until every mother and baby may expect and shall profit by the advances of scientific medicine.

Our program, however, does not go far enough, and our concept is not as yet adequate. It is not enough that every conception shall result in a healthy, living baby. Our real problem is to help in the production of useful citizens, men and women who will be a credit and a benefit to society, instead of a burden on and an enemy of society. There are too many incompetents, too many mental and psychopathic inferiors, who owe their lives to our skill, only to have them become a burden, if not an actual danger to the useful members of the community. Most of these individuals are not "sports" or accidental misfits, but are the obvious and to-be-expected fruits, from their family tree.

It seems to me that our path in this field is plain. We cannot restrain the desire to co-habit, which seems especially strong in these uncontrollable personalities, but we can urge sterilization of the obviously unfit—the habitual criminal, the mentally unbalanced, and the degenerate. Gradually we will eliminate from our human herd the blood of this inferior stock, and America will be a safer and a happier place to live.

There is another great group that should engage our attention — the economically unfit. These we have always had with us in Oklahoma—the one-gallus son-of-gun in a two-room house. This tribe has increased enormously in these past years of depression, repression, the WPA dole and the like. It is possible that a family of this type can rear a family of one, two or even three children, feeding, clothing and educating them, and making of them, worthwhile members of the commonwealth. There comes a time, with the multiplicity of off-spring, however, when the heritage and the environment breeds only dirt, hunger, neglect, lack of mental and moral

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training — and from this soil comes the anti-social member of the mobs, the hijacking gangs, and finally the bulk of our prison population. The dissemination of birth-control information in this group, properly conducted by organized medicine, supervised and controlled, will do much to alleviate the hard-ships of this group and elevate the social and living standards of the whole group. Such work is already being started in several of our communities, and should spread throughout the state under the influence and control of the medical profession.

Even among our private patients, we can serve as improvers of the race, if we will but try. Can we not regularly and consistently urge a pre-marital examination, until it shall become a legal pre-requisite for marriage? Thereby we can eliminate most of the diseased, and many of the physically unfit and mental cases. This examination, with an intelligent attempt to give pre-marital advice where possible, plus pre-conceptional consultations with those of our families, already married, would do much toward improving the all-round quality of the babies who are born, giving them and their families an opportunity to fill their places in the world adequately. In this field we could give contraceptive advice to those with bad mental backgrounds, or severe constitutional disease. Knowledge of sex and marital hygiene will go far toward making a happy, adjusted home, which is the family background every youngster needs. The matter of family planning should be stressed, and the dangers and results of abortion should be explained. It is easier to prepare the minds of a young couple, when they are planning a family, than convince them when they are faced with an untimely and perhaps unwanted pregnancy.

We shall, never, perhaps, know the biologic laws and the individual histories of the human animal, sufficiently so we can mate them even approximately well. It is doubtful, if we shall even advance very far, in applying the eugenic laws we know, for the human is a complex, and a stiff-necked race, and that goes double for those with the love madness. It is incumbent upon us, who are peculiarly fitted to know the problems, and to proceed logically toward their solutions, ever to think on these things. I leave for your thought the ideas of pre-marital and pre-conceptional advice. I urge you to work for the compulsory physical examination of those about to get married. Consider the establishment in your community of supervised birth-control clinics for the under-privileged, and be insistant, in season and out of season, for the legal sterilization of the unfit.

Finally, we must never forget the lessons we have learned about the care of the parturient woman, and the protection of the new-born baby, yet our responsibility goes farther than this. We must consistently aim toward the elevation of the physical, mental, and social standards of the human race in our state and nation.

Analgesia and Anesthesia in Labor*

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In our experience we are satisfied that there is no harmless anesthetic or analgesic. Knowing this and also knowing that most women demand some form of relief during labor, one should, only by constant and intelligent observation of patient and baby administer the various drugs and combination of drugs used in obstetrics today. Some of the more popular drugs are: scopolamine morphine, and its various modifications, the amytals, sodium pentobarbital and scopolamine,

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quin-ether oil, paraldehyde, pantopon and sodium evipal. There are the anesthetic agents: nitrous oxide, ethylene, cyclopropane, ether, chloroform, and local anesthesia.

Every one knows that no one drug acts the same on every patient. This fact makes the giving of the various relief agents a difficult problem in obstetrics. A drug may be ideal for one patient but affect the next in such a manner that she becomes most unruly, not only endangering herself and the baby but even making things quite disagreeable and uncomfortable for the attendants. Such a case is much more difficult to handle than a woman in her right mind who is having the usual labor pains.

Occasionally comparatively small doses of analgesics stop labor pains almost completely. Of course, the labor usually starts again but in the meantime the patient has become quite discouraged, to say nothing of her mother and husband.

There are reports in the literature of maternal deaths due to the administration of any one of the above mentioned drugs. Luckily such cases are rare, yet one death due to improper administration or carelessness would not be forgotten quite easily.

I am sure most obstetricians would like to dispense with our analgesics and most of our anesthetics altogether, yet when a woman in labor asks for it, we think it is our duty to give some form of relief. We have tried most of the analgesics used in obstetrics today, but have relied upon morphine and scopolamine in by far the greatest number of cases. Occasionally we use nembutal. Nembutal makes pain tollerable, produces a dream state affording almost perfect amnesia and usually does not interfere with progress of labor. The amytals act similarly to the pento-barbital. We have abandoned quin-ether oil mainly on account of the inconvenience of its administration and the irritation it causes to the rectum. We have had no experience with paraldehyde or sodium evipal. Pantopon is used in an occasional case, that is, one sensitive to morphine.

Regardless of what medication one uses and regardless of how careful he is there will be harmful results either to the baby or to the mother occasionally. All orders for medication used in labor should be written and not given verbally to some nurse. There should be no routine orders for any of the sedatives.

In the normal patient our chief concern is the baby and not the mother. The mother usually recovers quite satisfactorily following any form of reasonable medication. The baby however is not only subjected to the various depressing effects of the drugs but usually is allowed to be pressed for a longer period of time during the second stage of labor, or if not this, the termination of labor is by use of some forecep operation more difficult and much more dangerous to both the baby and mother than the ordinary prophylactic forcep operation. There are many women unfortunately who are not normal, and their particular condition demands special attention as to the relief of labor pains both in the first and the second stages of labor. In the first place we usually omit our analgesics in a primipara with a contracted pelvis and a floating or high head. We use no drugs in inertia uteri. No sedatives except morphine are given in advanced pulmonary or heart disease. Scopolamine and the barbiturates tend to speed up an already too fast pulse. No medication for relief of pain should be given if there exists an immediate or prospective indication for the operative termination of labor as in placenta previa, asphyxia in utero, and so forth. Very seldom is any drug given in advanced labor, at least not less than two hours previous to delivery.

Ether may cause a bronchitis and even pneumonia especially in the presence of an acute upper respiratory condition. Chloroform affects the liver and kidneys and may occasionally lead to an acute yellow atrophy of the liver. Consequently, it should never be used in any pre-eclamptic, eclamptic, or any case with kidney or liver dysfunction. Ether should be used in place of the various gases when it is necessary to operate in heart disease or shock, and when uterine relaxation is required as for version or other intra uterine manipulation.

During the second stage of labor we pre-

fer either nitrous oxide or ethylene, to ether or chloroform. We use nitrous oxide in our practice probably because of some danger of explosion with ethylene anaesthesia. Explosions, of course, are rare yet I have more peace of mind when using a gas with less explosive characteristics. Ethylene has its advantages however. A higher percentage of oxygen may be given with ethylene whereas nitrous oxide requires partial asphyxiation to produce anasthesia. Both gases cause a tendency to capillary oozing. We have never used cyclo-propane. In the administration of nitrous oxide the time for giving the gas depends upon how much pre-anesthetic medication has been given to the patient during the first stage of labor. Some patients need no anesthetic until the head is ready to be born or until an episitomy is done or instruments applied for delivery. However, for the patient that has had no, or very little, medication during the first stage; in primiparas we start gas usually at the beginning of the second stage of labor and in multiparas we begin our gas at any time the pain becomes quite severe after dilation has well advanced. The amount of nitrous oxide needed varies with every patient. When giving gas with pains the patient must not become cyanotic nor should she lose consciousness until time for delivery. We usually allow water sparingly during this time. This prevents parching of the lips and throat. During the birth of the baby deep anathesia is produced for a few minutes. Immediately after the birth of the baby a few breaths of pure oxygen are given to the mother. As a rule nitrous oxide does not lessen the strength of the uterine contractions appreciably.

In consideration of the baby since one seldom sees a narcotized baby from the administration of nitrous oxide we have depended upon this agent as our chief analgesic during advanced labor. It is not unusual that one patient gets this gas so long as two or three hours. Usually a very high percentage of oxygen with nitrous oxide will satisfy the most difficult patient. This is not the very easiest procedure, yet the end results are most gratifying. During earlier labor we give hypodermics of morphine and scopolamine. The usual doses being one-sixth grain of morphine and one two-hundredth grain of scopolamine. The first hypodermic in primiparas is given only after labor is well established. In a primipara we may repeat the same dosage of scopolamine once or twice, usually at two or three hour intervals. In the average patient a second dose of morphine is not given, yet, we do not hesitate to repeat it if labor is porgressing quite slowly in spite of severe pains. We think it better to give no medication in cases of abnormally prolonged labor. In such a case the baby is already subjected to excessive amounts of pressure and trauma and the addition of any depressing drug may prove fatal. In labors of 24 to 36 hours or longer the pains are usually of such nature that no medication is required. The mother's pulse and the fetal heart should be watched quite closely and body fluids supplied by intra-venous and subcutaneous routes if necessary. As a rule, in multiparas, we give no medication during the first stage of labor. Usually labor is not so long and when sedatives are required, nitrous oxide may be given. One can usually depend upon a short enough labor for this procedure, however, there are many exceptions. If there is a possibility of prolonged labor and the pains are sufficiently strong then our medications are the same as in primiparas.

If we ever use barbiturates they are used in small doses. This is almost a useless procedure so far as relieving pain is concerned. To relieve pain or produce amnesia with pento-barbital or any of the barbiturates one must use very large doses. As high as five to seven and one-half grains of nembutal must be given at one time. These large doses naturally benumb the respiratory center of both the baby and the mother. The babies after such treatment are usually dopey for several days and take up nursing unwillingly. Never should a barbiturate and morphine be given together, as both are powerful respiratory depressants, and may do serious harm to the baby as well as to the mother. It is not our intention to produce complete amnesia for any patient. To most obstetricians a baby born with a lusty, piercing cry is much more satisfying than one which requires five to ten minutes to resuscitate. One can only hazard a guess as

to the future life of an individual who has recovered from a period of oxygen want in his brain. It is a well known fact that prolonged cyanosis destroys brain cells and that destroyed brain cells are irreplaceable. It has been suggested that some of the later psychoses observed in children and adolescents, perhaps the problem child, spastic muscles, and so forth, are due not alone to trauma but to the asphyxia so common after hard deliveries.

During the second stage of labor, which is usually prolonged to the detriment of the baby by the administration of any sedative, one must watch the fetal heart tones quite carefully. They fluctuate normally, usually ranging from 80 to 90 beats per minute immediately following and during a pain to 160 or thereabouts between pains. There is little cause for alarm unless they remain below or above these figures. In the second stage the irregular heart beat is very significant, especially the irregular slow heart. This certainly is an indication for an immediate forcep delivery. Another danger sign is the passing of meconium. This usually indicates a distressed baby and again labor should be terminated

Too frequently in obstetrics it is necessary for one to perform a cesarean section. Although a local anesthetic may be used to advantage in many normal deliveries we confine our local anesthesia to cesarean sections. Some patients are given general anesthetics for sections but as a rule only to those patients who are in the very best condition. It would not be a bad procedure to do all cesarean operations with local anesthesia, however. This method of anesthesia proves especially advantageous in all types of complicating heart conditions, acute respiratory infections or in any type of vital organ impairment in which general anesthesia would act as an overload. In toxemias of pregnancy, in which the physiology of the mother is greatly unbalanced with accompanying liver dysfunction, one could hardly think of a better reason for choosing a local in preference to a general anesthetic.

STILLBIRTHS*

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Introduction

Too frequently we neglect to find out the etiology of the stillborn or to do autopsies on them because we feel that, even though we have lost the child, we have successfully protected the life of the mother, or prevented lacerations, hemorrhages, trauma, etc., particularly if the labor and delivery were difficult. However, a critical review of the "obstetrical autopsy sheet" seemingly should afford a very effective means of ascertaining our limitations in reducing the incidence of stillbirths as well as reveal many of our mistakes in management and treatment.

Before we enter into the discussion let us first define "stillbirth."

Definitions

1. Dorland, The American Illustrated Medical Dictionary, "The birth of a dead fetus." Fetus: "The child in the womb after the end of the third month."

2. De Lee—"Some confusion exists regarding the definition of 'Stillbirth'—the majority of authors hold stillborn and dead-born to be identical, which appears to me the simplest way."

3. American Public Health Association: "A stillborn child is one which shows no evidence of life after birth (no breathing, no action of heart, no movements of voluntary muscle). Birth is considered com-

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plete when the child is altogether (head, trunk, and limbs) outside the body of the mother, even if the cord is uncut and the placenta still attached."

4. Certificate of Birth, Oklahoma State Board of Health—"A stillborn child is one that neither breathes, nor shows evidence of life after birth."

It is obvious that there are several discrepancies or inadequacies in the above definitions. A satisfactory, complete definition must answer the following points: period of gestation of the fetus, time of death in relation to the birth, what physiological actions of the baby are to be used as criteria of life and death, and a satisfactory uniform definition of birth.

The period of gestation is important. Everyone agrees that the expulsion of a fetus before it is viable is an abortion and not a stillbirth. Thus "stillbirth" must include all fetus born dead after they have reached the period of viability, which is generally considered about the 28th week. However, our definitions are not concise on this point, and all stillbirth statistics vary in the duration of gestation in their classification of stillbirths. Gillespie and Dunham included deaths after five months gestation in their stillbirth statistics.

Is the death, two or three weeks before birth, of a fetus of 28 weeks gestation or more classified as a stillbirth the same as a fetus that dies during or at birth? According to our definition of *born dead* it must be.

The definition of the American Public Health Association is adequate in its description of those actions of the baby which denote life and what constitutes birth. However, it seems to me that the heart beat should be the only index needed for determining whether the fetus is alive, and much less confusing than trying to detect slight attempts at respiration, or movements of the limbs. Gillespie recorded among his reports on stillbirths those cases in which the fetus never breathed, even though the heart continued to beat for a few minutes after birth. Such cases, it seems to me, would be better classified as neonatal deaths.

A simple definition which seems to answer the prerequisites which were previously stated is: "A stillbirth is the birth of a fetus of 28 weeks or more gestation which has no heart beat. Birth is considered complete when the child is altogether (head, trunk, and limbs) outside of the body of the mother, even though the cord is uncut and the placenta still attached."

Using the definition one would probably prefer to divide the stillbirths into two groups, in so far as management and treatment is concerned, namely: those that died before the onset of labor, and after onset of labor.

Etiology of Stillbirths

About 90 per cent of all dead born fetus can be grouped into one of the following clinical groups: asphyxia, prematurity, birth trauma, congenital anomalies, and maceration. However, some of the more specific, common causes of fetal death are as follows:

I. *Maternal.*

1. Systemic Diseases — Syphilis, heart disease, toxemia of pregnancy, diabetes, pernicious anemia, pneumonia, typhoid fever, scarletina, measles, malaria, metallic poisonings (lead, phosphorus, coal gas), focal infections and upper respiratory infections(?), septicemia.

2. Anomalies—Bicornate uterus.

II. *Developmental Causes.*

1. Cord anomalies — Short cord, coils about neck, knots, tumors of cord, velamentous insertion.

2. Placental—Premature separation, too small, abruptio, tumors.

3. Hydramnios.

4. Fetal—Papyraceous, monsters, hydrocephalus, anencephalus, etc.

III. *Accidents of Labor (Trauma, asphyxia, hemorrhage).*

1. Abnormal presentations, difficult deliveries, asphyxia.

2. Intracranial hemorrhage.

3. Trauma to vital centers.

IV. *External Factors.*

1. Anaesthesia, analgesia.

2. Drugs—Quinine, salicylates.

V. *Lethal mutations (maceration).*

Diagnosis

The diagnosis is not made until birth, but sometimes the death of the fetus can be diagnosed before birth, or during labor.

Diagnosis of Death of Fetus Before Onset of Labor.

1. Lack of fetal movements (preceded by hyperactivity).
2. Failure to elicit motion by:
   a. Having mother hold breath several times (Drosin).
   b. Grasping anterior shoulder of fetus pushing up and back (Drosin).
   c. Pressure on fetal head in rectal or vaginal examination (Kanter).
3. Lack of fetal heart sounds.
4. Inability to palpate fetus satisfactorily because of flabbiness. (Spalding's fetal collapse). Softened fetal skull.
5. Decrease in size of uterus since last examination.
6. Increase in uterine souffle.
7. Retrogressive changes in breasts (Williams), soft, flabby.
8. Maternal systemic symptoms: Chill, nausea, malaise, bad taste and breath, epigastric pain, lower abdominal pains.
9. Laboratory tests:
   a. Ascheim-Zondek.
   b. Drop in B. M. R. (Baer).
   c. Acetonuria (Polak). King refutes this.
   d. Shorter coagulation time of blood (Guirauden).
10. X-ray shows overlapping of skull bones (Horner, Spalding).
11. "Audible silence." (A. D. Horner).

Diagnosis of Death of Fetus After Onset of Labor.

1. With rupture of membranes, foul smelling amniotic fluid, colored.
2. Rectal and vaginal examination on feeling crepitant skull bones.
3. Abnormal presentations occur more frequently (Dippel).
4. Absence of cord pulsation if version or intra-uterine manipulation is being done.

With the perfection of the fetal heart amplifiers which are being used in the delivery room in some clinics, fetal distress may be detected earlier, and death after full dilation may be reduced.

Stastics

United States—The stillbirth rate in the United States has dropped gradually from 1933 to 1936, the rates for those years being 3.7 and 3.4 per 100 live births respectively. The total number of stillbirths has dropped from 77,059 to 73,735 annually during that time. The total number of live births in 1936 in the United States was 2,144,790, as compared to 77,059 stillbirths for the same year.

In 1936 the states with the highest stillbirth rates were Georgia (5.9 per 100 live births), South Carolina (5.8), Florida and Maryland (4.9). These are all southern states with comparatively large negro population, which probably means many midwives in attendance. However, Wyoming, which is the 48th ranking state in so far as population is concerned, which means that doctors are also probably harder to reach, has the lowest stillbirth rate in the United States, namely 1.4 (1936).

The three states with the greatest number of stillbirths for the years of 1933, 1934, 1935, and 1936 were: New York, 7,221 (1936), Pennsylvania, 5,034 (1936), and Texas, 3,905 (1936). It is rather interesting to note that Texas is the fifth ranking state according to population, yet it has a higher stillbirth rate and number of stillbirths than Illinois and Ohio, which rank third and fourth respectively in population.

Oklahoma—Oklahoma is the 21st ranking state according to population, which was estimated at 2,509,000 in 1935. According to the Bureau of Census of the Department of Commerce, Washington, D. C., Oklahoma had 1,181 stillbirths in 1936, as compared to 41,815 live births, making the stillbirth rate 2.8 per 100 live births.

In 1936 there were 17 other states in the United States which have a lower stillbirth rate than Oklahoma, and two others with the same rate, so that Oklahoma ranks in stillbirth rate about the same position as in population (20th). There are several questions which naturally arise. Does this

mean that we have better obstetrics and obstetricians, give better care than the 28 other states which have a higher rate, or does it mean poorer statistical records, inadequate reporting of stillbirths, poorer filing blanks, etc.?

The stillbirth rate for Oklahoma from 1932 to 1936 inclusive has been 2.6, 2.6, 2.8, 2.9, and 2.8 respectively, which is a slight increase. The greatest number of stillbirths was in 1934, with a total of 1,301 for that year.

Let us interpolate the stillbirths in Oklahoma for 1936, which totaled 1,182 into the figures of previous investigators. The excellent reports of Plass, Grulee, Dippel, Gillespie, and Dunham show the various causes of the stillbirths.

According to Grulee and Gillespie the chief causes for stillbirths were: prematurity, intrauterine death (maceration), birth trauma, and asphyxia, which accounted for 65-75 per cent of all stillbirths. These were divided into prematurity (13-16 per cent), asphyxia (33 per cent), trauma at birth (30 per cent), intra-uterine death (16-40 per cent). Congenital defects in the fetus accounted for 5-10 per cent of the stillbirths. Williams (in 1920) reported 302 fetal deaths and ascribed syphilis as the cause of death in almost one-third of them. More recent reports from other clinics do not agree with his findings, however. Placing our 1,182 stillbirths into these groups we find the following: trauma at birth, 354; prematurity, 177; intrauterine death, 177 to 472; congenital defects in fetus, 59 to 118; leaving only 60 cases unclassified.

Birth trauma, certain cases of prematurity, asphyxia, and certain cases of intrauterine death can be directly influenced by the obstetrician. Congenital defects are problems in eugenics which are affected more by legislation than by the obstetrician, except possibly in an advisory capacity directly to the patients, who seek it. However, we, as obstetricians, have direct influence over the outcome of 50-60 per cent of all stillbirths. Curtis says that about 50 per cent of fetal deaths are due to faulty obstetrics, one-fourth due to curable diseases of the mother, and one-fourth unpreventable. This is a direct challenge to the obstetricians, and those doing obstetrics. We must seek the causes, and attempt to correct them.

Discussion

In spite of the fact that the stillbirth rate and total number of stillbirths from 1932 to 1936 in the United States shows no tendency to increase, there are several factors prevalent now which may maintain this level or even cause an increase in the rate. Some of these factors may also influence the neonatal mortality rates. They are: inaccuracies in stillbirth reports and statistics, increase in the use and indications for induction of labor as in toxemia and cases of borderline pelvis, demands for complete relief of pain and amnesia by the patient, and the increasing incidence of operative deliveries.

Stillbirth Reports

Some states have only one report to be filled out by the physician in cases of stillbirth. In these states, if the newborn child shows very little evidence of life and dies in the first five or ten minutes following delivery, it is much easier for the attending physician to call it a stillbirth and save the time of filling out a death certificate also. Also, if the parents are told that their baby was stillborn, it seems to provoke less questioning of the doctor as to the exact cause than to have to explain why their baby did not live but a few minutes.

Bundesen, in Chicago, has recently pointed out the inaccuracies of the International List of the causes of death for neonatal mortalities, and is endeavoring to get them corrected. A revision of the causes of deaths for stillbirths might not be inapropos at the same time.

Induction of Labor

As we are getting better methods and facilities to diagnose disproportion, contracted and borderline pelvis by X-ray encephalometry and pelvimetry, we are attempting to induce labor either early in borderline pelvis or at term to lessen the cases of postmaturity and oversize babies. The textbooks still list techniques of induction which contain 20 to 30 gr. of quinine, and large doses of Pituitrin in spite of the fact that Gellhorn, Torland,

and others have reported fetal deaths from their use. Also, there seems to be another pathological condition of the lungs called "congenital pneumonia" which Leff attributed partly to the use of pituitrin during labor.

Demand for Relief of Pain

We are all quite aware of difficulties encountered in conducting a painless childbirth, and the increasing demands of our patients for complete relief, after reading articles in the current popular periodicals telling them that they should not only be absolutely free of pain but also have complete amnesia. This demand has placed a tremendous task on the obstetrician, with the threat that if he is unable to satisfy it he will lose his practice to the obstetricians who can. Consequently, heavier doses of analgesia and longer anaesthetics are being used. Eastman has shown that gas (N20-02) given in proportions of less than 85 to 15 are not harmful to the fetus, but that in concentrations greater than this, definite effects on the fetus can be noted. Everyone of us have seen sleepy babies following the use of Nembutal and other barbiturate analgesics during labor, and I'm sure that I've seen newborns fail to breathe because of their use. This, of course, would affect the neonatal mortalities chiefly. However, Franklin Snyder of Johns Hopkins has shown that fetal respiration in utero does exist in animals. He has also shown that the administration of Nembutal to the mother animal causes a marked slowing of the intrauterine respiratory movement of the fetus. Perhaps this will explain some of our stillborns which have asphyxia as the only ascribable cause of death. This question has been brought out by Dr. Eastman.

Operative Deliveries

Plass in Iowa, in a very exhaustive study found the stillbirth rate four times as high in operative as spontaneous deliveries. He noted that the operative incidence among primipara was four times as great as in multipara, and that the stillbirth rate was higher in primipara. He also noted that stillbirths were higher in version and extraction and breech delivery than in any other operative procedures, including Caesarean sections. Plass concluded that "the stillbirth rate among full term children increases in proportion to the operative incidence (so that it is highest in urban hospitals where operative intervention is more commonly practiced)." It is generally considered that the incidence of operative procedures is mounting, especially in the larger clinics.

Conclusions

1. Stillbirth statistics are presented.

2. A uniform definition is needed with revision of the International List of causes of death for stillbirths.

3. Questions for additional information on the certificate of birth or death in cases of stillbirths would aid in this problem in our state.

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Birth Control*

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I selected this subject when requested by your secretary to present a paper before this section and soon found myself in an embarrassing predicament—"caught in a trap," so to speak, and it all happened because I knew and still know so little about birth control outside of my experience in private practice and seven or eight years conducting a prenatal clinic sponsored by the Tulsa County Public Health Association, and yet it is a subject that intrigues my interest.

In the first place reproduction is a primitive instinct, inherent in all animals.

Man, in the process of evolution, developed an intellect and a will. As these two protuberances of his forebrain developed he found himself, through them, adapted to social intercourse and civilization which, of course, led to organization, government, etc. His life became more complex and he fought his enemies and conquered them; he solved some of the problems that threatened his life, but the impulse to live and reproduce is still dominant although those instincts in the process of civilization have become perverted.

It is trite but true to say that the human male, like the males of most lower animals is, by nature, a polygamous animal. Human laws and social conditions have put restraints and regulations upon him which, through the ages, he has been compelled to acknowledge as right and good.

However, through these same eons of time, changes have taken place in the female of the human species. She ovulates in a more frequent cycle than other animals and submits to sexual relations more frequently than does the female of other species.

Man worries and struggles with the problems of birth control and eugenics; trying to evolve some plan that will supplant the law of the survival of the fittest.

He is as stiff necked as the ox which was one of the first among domesticated animals, and is so imbued with the idea that he can work out his own destiny that he will not junk the notion that he can circumvent, at will, the union of the wily spermatazoid and the coy ovum.

Nature has not lost control of the process of reproduction in man, and it is my conviction that she never will. I realize, however, that telling the world of my personal conclusions will not stop the fight.

Birth control is a social problem and involves economics, religion and all phases of civilization.

If control is essential to the betterment of society and mankind in general, then the medical profession must interest itself to the extent of determining the most scientific and efficient method of control and that alone should be its responsibility. I think the medical profession does sense its responsibility and that it will fall to our lot to teach the social worker that birth control does not mean contraception alone.

These enthusiasts are now fostering and abetting one of the most gigantic commercial rackets of modern times. I refer to the manufacture and sale of so-called contraceptives. We, as medical men, know that this racket has supplanted the patent medicine business as the leader of frauds in the United States. This profitable racket is becoming a menace to the ethics of our own profession, even greater than the practice of abortion.

I will mention only one device: the so-called gold cap or button pessary with the hairpin spring, inserted in the cervix. I have removed several of these in recent years from cervices where they had become imbedded and, in two instances, have

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I found them in the cervices of women, one three months and the other five months pregnant.

In every instance these had been placed by so-called reputable physicians. There may be men whose ignorance would be responsible for imperiling the health and life of their patients but it may be done for the fee.

Birth control must be scientifically studied, not with the idea of limiting reproduction but to overcome sterility and spacing pregnancies. Contraception has long been recognized as a phase of preventive and public health medicine. It seems that many present day social workers think birth control or limiting reproduction among the indigent class is a comparatively recent or modern idea.

As proof to the contrary and to substantiate the old saying that there is nothing new under the sun, let me mention a few examples of early knowledge of contraception cited by Norman E. Himes in the Journal of Contraception, May, 1937.

"A few primitive peoples knew a sterile period.

"An Indian tribe living in the northern part of South America possessed a female condom made from a large seed pod.

"In the mika operation used by the Australian natives an artificial hypospadias was created.

"The Ebers papyrus of Egypt, 1950 B.C., mentions the first known chemical contraceptive; viz: tips of acacia intravaginally —under fermentation acacia forms lactic acid.

"Aristotle recommended smearing the os uteri with olive oil and recently Dr. Maric Stopes rediscovered the method for the poor of the Orient.

"Soranus' Gynecology in the second century, A.D., lists the greatest array of contraceptive suppositories and pessaries to be found in medical literature for centuries.

"The Biblical reference to coitus-interruptus.

"Fallopius, the Italian anatomist — discoverer of the tubes which bear his name —mentioned the glans condom.

"The vulcanization of rubber in 1840 made effective the diffusion of knowledge of the condom as a preventative."

These examples of early knowledge of contraception show that little progress has been made, either in scientific agents for contraception nor has birth control been very effective in reducing the birth rate among the indigent classes.

This paper has been presented merely to raise the question—What and how much are we, as medical men, going to do about it?

Prenatal Care, or the Management of Pregnancy*

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Prenatal care is the supervision, care and instruction given to pregnant women.

By careful examination and frequent observation, toxemis of pregnancy and other progressive illnesses arising in the pregnant woman may be reduced, and with complete prenatal care eclampsia, our most horrible complication with its high mortality rate can be eliminated.

In addition to reducing and eliminating complications, prenatal care provides a means of accurate determination of the size of the fetus in relation to the pelvis, the type of presentation and position. With this information the probable type of delivery may be planned insuring maximum safety against the accidents of parturition.

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In the present day of general obstetrical information and education, the duties of the medical attendant are very definite.

On the first visit of the patient, the doctor should obtain:

1. A short, concise past history embracing the following.

   a. The occurrences of family diseases and a malignancy history.

   b. A history of childhood diseases, including scarlet fever, diphtheria and particulary if there were any sequelae.

   c. A complete menstrual history, the date of onset, cycle, whether or not there is any complication, if so, what?

   d. A history of operations, their type if any.

2. History of previous pregnancies, their dates, illness during pregnancy, nature of the labor, length of labor and type of delivery.

3. A complete physical examination; in detail of the head, eyes, ears, nose, throat, tonsils and teeth; refer to a good dentist for check up, and if there is any cavity, this should be filled immediately.

Next examine the neck, thyroid and cervical glands; following this the chest; heart and lungs should be examined if any questionable conditions arise, these should be checked by X-ray and other laboratory procedures.

The breast should be examined and the type of nipples determined; show the patient how to evert the nipples and instruct her to do this two or three times daily in order to assure that they will be everted and tough. This procedure will greatly facilitate nursing.

The abdomen should be examined and the condition of the abdominal wall determined. Estimate the height of the fundus, and determine the presence of hernia and rashes.

The Pelvis: Examine for lacerations or other pathological conditions existing.

Measure the pelvic outlet. Take a smear routinely from the cervix. Take the blood pressure and obtain a urinalysis and Wasserman.

Subsequent Visits: The patient should be instructed to return at intervals of three to four weeks bringing a specimen of urine. On each of these visits the pregnant woman should be questioned as to her well being, ability to rest and sleep, and any required advice given.

Blood ppressure, urinalysis and weight should be taken and recorded each time.

Diet: It seems reasonable that if the food intake of the mother be restricted the child will be reduced in size and weight, thereby causing an easier delivery. Observation proves this erroneous, since the child being a true parasitic growth, develops at the expense of the maternal tissues no matter how marked the degree of underfeeding. The nutritional problem as it arises during gestation may be considered as follows:

1. The frequency of abnormal appetite causing pregnant women to overeat with a consequent excessive gain in fat and greater strain upon the already laboring excretory organs.

2. The tendency to over indulgence of protein and urea rich foods, with the attendant danger of kidney failure.

3. The various methods by which food intake may be made to regulate the size and weight of the fetus. In regard to the quantity of food eaten it is generally known that pregnant women over eat. An undernourished patient has a better chance of withstanding the stress of labor and avoiding toxemia than one who is excessively overfed.

In contrast to using a restricted diet it is much more satisfactory to group the foods: The following grouping is very satisfactory:

1. One and one-half pints of milk daily. This may be used in cooked foods.
2. Calcium, (calcimalt or cal gluconate tablets) if the patient prefers the calcimalt may be added to the milk.
3. Cod liver oil.
4. No pork or fatty meats, crisp bacon excepted.
5. Small amounts of lean meats, fish and eggs once daily.
6. No fried or greasy foods, medium portions of fried chicken occasionally.
7. Green vegetables and fresh fruits at

least two at the noon and evening meal and one raw.

8. Starchy foods are to make up the least part of the diet.
9. Sweets, only small amounts of sweets and desserts should be taken. An occasional Coca-Cola or other carbonated water is permissable.

With this grouping patients average about 20 pounds gain, and rarely gain as much as 25 pounds.

Maintenance of a balanced diet is required and pregnant women should not be permitted to reduce arbitrarily during this time.

Hypotension is encountered in a large number of patients, a systolic reading of 100 mm. or even less being found very often. This condition is regarded as of little significance.

Hypertension is one of the great warning signals of impending toxemia, especially is this true when a pressure apparently normal during the first few months, steadily rises as pregnancy proceeds. In these conditions the urine should be examined with the utmost care. The patient should be considered toxic and treated accordingly.

At the seventh month, the patient should be completely re-examined, the position and presentation of the fetus being determined at this time, and again at the ninth month to recheck the type of delivery that is anticipated.

Hygiene

Dress: Garments which, while accommodating the patient's changing figure, still retain lines of grace may be obtained. The usual corset may be worn until about the fifth month, when a maternity corset may be adopted.

Shoes should not be changed unless swelling of the feet necessitates the use of a larger size. One who has been accustomed to wearing high heels should continue to do so and vice-versa.

Exercise: Dancing, golf and walking are advised. Heavy lifting and arduous labor should not be permitted. An abundance of sunshine and moderate exercise in the fresh air are essential.

Bathing: A daily bath, preferably a shower is desirable. The bath should be neither hot or cold, but pleasantly warm, and should be followed by a brisk rub. Swimming in quiet waters may be moderately practiced.

Automobiling: It has been found that the strain of resisting road shock, sudden starting and stopping and rapid turns, is quite exhausting and too frequently results in debilitating fatigue. There may be some nerve strain dependent upon steady and long continued exposure to the wind by a rapidly moving vehicle. However the relaxation, change of scene and fresh air to be obtained through moderate uses of the motor car are of inestimable benefit. The patient may drive to about the sixth month provided reasonable care as to speed and accident is used.

Regulation of Bowels: Evacuation should occur daily, if constipation supervenes it is to be met by gentle laxatives.

Maternal Impressions: Scientific opinion of the present day denies the possibility of the direct transmission of a maternal impression upon the fetus. The physician should be very definite regarding this matter. The strongest emphasis should be laid upon the fact that the fetus is fully formed at the end of the sixth week, and that no mental image created in the mother's mind has any effect whatsoever upon the child.

Preservation of the Figure: The athletic girl of today because of her indulgence in swimming, tennis and other types of exercise, runs but little risk of losing the tone of her abdominal muscles as compared with her languishing sister of a generation ago. After impregnation there is no longer time to strengthen the abdominal muscles, the wearing of corsets should be advised. The support of the abdomen is of more importance in relaxed multiparae in whom the abdomen may become so pendulous that malpresentation quite often occurs.

Coitus may be indulged in cautiously during pregnancy until about the seventh month, during the first three months special care should be exercised at about the time menses would ordinarily take place.

Sleep: Due to strain and stresses to

which a pregnant woman is exposed, it is imperative that she should have an abundance of sleep to restore her nervous tone. Eight to ten hours, with an hour or so in mid-afternoon.

Morning sickness: This at times is quite annoying causing uneasiness especially if allowed to continue untreated.

Nervous System: Insomnia, restlessness and anxiety are common accompaniments of what is otherwise a normal pregnancy.

Back aches and pains in legs: Back aches are due in most cases to a change in posture produced by the weight of the pregnant uterus, and to sacro-iliac strain; a well fitting abdominal belt gives support and relief of pain. Pains in legs: This condition is often annoying and difficult to manage. It is the result of pressure of the presenting part, and disappears with delivery.

Tingling and numbness of the hands and feet: These seem to be a result of calcium deficiency and will generally respond to calcium therapy.

Determination of Sex: This is still a realm of conjecture and is abused by many of our colleagues, a practice which should be discouraged.

Selection of Nurse: The patient should be instructed to secure the services of the best type of nurse permitted by her financial budget.

Surgical Operations: Surgery is to be avoided if possible, and still stay within the realms of safety.

The Treatment of Poison Ivy*

HERVEY A. FOERSTER, M.D.
OKLAHOMA CITY, OKLAHOMA

The ivy plant is known by the botanical name of Rhus Toxicodendron. The active principal causing the poison ivy dermatitis is a glucoside called toxicodendrol. This active principal can be destroyed by alkalies, less so by acids. So one of the best prophylactics after exposure or suspected exposure to the ivy vine, is plenty of washing with a good strong alkaline soap such as any of the so-called laundry soaps, followed by an alcohol sponging. If this procedure is carried out within an hour or two after exposure, many an otherwise severe case of ivy dermatitis can be prevented.

Children under three years of age are very rarely sensitive to the poison ivy plant and some individuals have a natural immunity. But by constant exposure and contact a sensitivity can be developed. A patient who is very sensitive to poison ivy can be helped or have his resistance increased. This is on the basis of allergic desensitization. The mechanism is not exactly known, as there is no reagins. The active principal of the Rhus plant can be carried by the blood stream to different areas of the skin and an extreme generalized reaction can be produced.

There are many external irritants that can produce a dermatitis venenata that may stimulate the dermatitis due to Rhus, so that a few words of caution are advisable; be sure that the dermatitis is due to poison ivy before you use any injections or ivy extracts.

I am going to describe the use of an easily made extract that I have been using which can be adapted both as a prophylactic and a treatment. The method is not original by me but is one that has been used for a number of years in the East and was developed by the allergic department of the Postgraduate Medical School of Columbia University, by my good friend, Dr. Will Spain, and I want to give him full credit for my knowledge of this method.

*Read before the Section on Dermatology and Radiology, Annual Meeting, Oklahoma State Medical Association, Muskogee, Oklahoma, May 10, 1938.

An extract is made by collecting the leaves of the Rhus plant, dehydrating the leaves in an oven, then crushing the dry leaves to a fine smoking tobacco like size. Next extract with absolute alcohol, in the proportion of 10 grams of the leaf to 100 cc of absolute alcohol. This is extracted for 48 hours then filtered and the filtrate made up into various dilutions from the stock solution, the 1 to 100, 1 to 1,000, and 1 to 10,000 are the strengths most often used.

Now in the desensitization procedure, suppose you have an individual who is highly sensitive to the ivy plant and who wishes to have his immunity built up before the start of the poison ivy season. You test the patient by putting on patch tests (usually on flexors of the arms or the back) of dilutions of your stock solution of the extract. Start out with the 1 to 10,000 strength. Read the results in 48 hours. If you get no erythema or vesiculation then test with the stronger dilutions. The strength of the solution that gives just a slight positive reaction is the one to begin your prophylactic treatment with. Your first dose is 1/20 of a c.c. of the extract diluted with .9 c.c. of normal saline solution injected subcutaneously. Inject once a week increasing the strength of the dilutions until you reach a top strength of 1/20 c.c. of the 1/10 solution. Usually eight doses are required for prophylactic treatment for the season. This should be given in January or February, and repeated each year.

For the treatment of an acute attack of ivy, dermatitis, there are several principles to remember in the local application of drugs. Never put on an oil or ointment, these retain the active principal and will prolong the dermatitis. Wet packs of boric acid solution, normal saline or weak potassium permanganate are the drugs of choice. A nice prescription is: Rx.

Phenol	2.0
Zinc Oxide	15.0
Lime water q.s	250.0

Sig: Sponge on every three hours.

I have seen several cases of tattoo marks left following use of Ferrous Chloride solution, so do not use it in the local treatment. Now the use of the extracts in the treatment of an acute attack: give 1/20 c.c. of the 1 to 1,000 solution every two days, usually three to five injections are necessary. After the second dose the patient usually shows improvement. If any reaction or exacerbation is encountered then, decrease your dosage or use the 1 to 10,000 dilution.

I find this procedure very satisfactory and in the cases that I have used it, I have had uniform good results.

I would like at this time to mention some of the difficulties in the diagnosis of Rhus poisoning. I recall one dear old lady who had a chronic eczema-venenata dermatitis on the face and hands and as it was during the winter months, ivy was not suspected, she was questioned about contacts, etc., she mentioned that she had some plants that she watered and cared for. On bringing leaves from the plants, one was a poison ivy plant that she had thought was the tame ivy. She had been watering it and caring for it since the fall before. This was proved to be the cause of her dermatitis.

Another individual had an acute dermatitis with vesiculation on the hands. He gave no history of being in the woods or in contact with plants. He worked at a filling station and of course gasoline dermatitis was thought of. He reacted negative to all tests with gasoline, paints and oils. However, on further questioning he remembered an automobile that had been into the station which had tied across the rear fender, oak leaves and branches which the occupants had gathered in the woods. I believe that this was the source of Rhus dermatitis. Occasionally, I have seen individuals with such a sensitivity that, driving through a country road, the Rhus toxicodendrol will be carried by the wind and the left side of the face and left hand alone will be involved if they are driving the car. I have seen several very severe cases where burning leaves and trash in the fall along with ivy vines, and the smoke borne Rhus will penetrate the clothed parts of the body as well as the exposed areas.

In closing, I wish to state that the treatment of ivy poisoning is still far from a satisfactory problem and you will hear prescribed and tried by the many patients who have suffered from this dermatitis a

host of things. Nearly everyone has a sure remedy, just as they will give advice on treating a cold. I have found the method of treatment I have outlined is a satisfactory one and it is on a rational basis.

The San Francisco Meeting

The following doctors attended the Annual Meeting of the American Medical Association, held in San Francisco, June 13-17, 1938. The Association, was represented in the House of Delegates by Drs. W. Albert Cook, Tulsa, and McLain Rogers, Clinton. Also seated in the House of Delegates, but not voting, were Drs. Horace Reed, Oklahoma City, and L. S. Willour, McAlester, Secretary-Editor. Dr. Earl D. McBride, Oklahoma City, appeared on the program of the Orthopedic Section. Dr. Henry H. Turner, Chairman of the Post Graduate Medical Teaching, attended a conference of those interested in Post Graduate Medical Teaching from various states in the Union.

A report of our Delegates will be published in the August issue of the Journal.

Following is the report of attendance from the state of Oklahoma.

Monday's registration: H. R. Anderson; W. G. Bisbee, Bristow; W. Albert Cook, Tulsa; Lt. Col. William S. Culpepper, Fort Sill; Phil J. Devanney, Sayre; William E. Eastland, Oklahoma City; James G. Edwards, Okmulgee; Roy E. Emanuel, Chickasha; Gallaher, Shawnee; James M. Gordon, Ardmore; George K. Hemphill, Pawhuska; Forrest M. Lingenfelter, Oklahoma City; Paul B. Lingenfelter, Clinton; Wendell Long, Oklahoma City; Earl D. McBride, Oklahoma City; W. R. Marks, Vinita; Warren T. Mayfield, Norman; George S. Mechling, Oklahoma City; William C. Miller, Guthrie; Harry Dale Murdock, Tulsa; Robert Urie Patterson, Oklahoma City; Dwight D. Pierson, Clinton; Horace Reed, Oklahoma City; McLain Rogers, Clinton; H. K. Speed, Jr., Clinton; Wildridge Clark Thompson, Stillwater; W. C. Tisdal, Clinton; L. C. Veazey, Ardmore; Harry Wilkins, Oklahoma City; L. S. Willour, McAlester, and Divonis Worten, Pawhuska.

Tuesday's registration: Wm. H. Bailey, Oklahoma City; A. M. Brewer, Oklahoma City; Anson L. Clark, Oklahoma City; D. W. Darwin, Woodard; Ephriam Goldfain, Oklahoma City; Everett S. Lain, Oklahoma City; John H. Lamb, Oklahoma City; T. H. McCarley, McAlester; Earl Winters Mabry, Altus; L. A. Mitchell, Stillwater; R. L. Murdoch, Oklahoma City; I. A. Nelson, Tulsa; F. S. Newman, Shattuck; R. C. Pigford, Tulsa; H. H. Turner, Oklahoma City, and Raymond D. Watson, Britton.

Wednesday's registration: R. H. Goldwaithe, Fort Sill; A. C. Hirshfield, Oklahoma City; Wayne M. Hull, Oklahoma City; Phil M. Lambke, Oklahoma City, and R. G. Sherwood, Tulsa.

Thursday's registration: L. J. Moorman, Oklahoma City; Marque O. Nelson, Tulsa; Lea A. Riely, Oklahoma City, and Charles B. Taylor, Oklahoma City.

International Goiter Conference

The Third International Goiter Conference will be held at Washington, D. C., September 12th to 14th.

The scientific sessions are open to members of the medical and allied professions who are in good standing.

All meetings are to be held in the ball room of the Mayflower Hotel, conference headquarters.

THE DOCTOR

Sculpticolor of Fildes' Masterpiece Goes to Rosenwald Museum

Now In a Permanent Home

The $150,000 reproduction of the Sir Luke Fildes masterpiece "The Doctor" first shown by the Petrolagar Laboratories at Chicago's Century of Progress Exposition in 1933, was recently presented by its owners to the new Rosenwald Museum of Science and Industry in that city.

Following the two World's Fairs, "The Doctor" exhibit went on a tour of 50,000 miles and was viewed by over 5,000,000 people in 18 principal cities throughout the country.

Designed to remind the public of the importance of the family physician, it required the full time of the late Chicago sculptor, John Paulding, and the noted artist, Rudolph Ingerle, and a large corps of assistants, and took nearly a year to complete.

In its new location in the Rosenwald Museum it will be seen by millions of visitors annually.

Additions To 1938 Roster

The following have become members of the State Association since the compilation of the Roster which appeared in the June Journal:

BECKHAM COUNTY

CARY, W. S. — Reyden
DILLARD, J. A. — Hammon
PHILLIPS, G. W. — Sayre
PITTS, D. H. — Elk City

CREEK COUNTY

COFFIELD, A. W. — Sapulpa

CUSTER COUNTY

SEBA, W. E. — Leedy

GARFIELD COUNTY

LAMERTON, W. E. — Enid

HUGHES COUNTY

WALLACE, C. S. — Holdenville

SEMINOLE COUNTY

GRIMES, J. P. — Wewoka
JONES, RUTH — Seminole
VAN SANDT, G. B. — Wewoka
VAN SANDT, M. M. — Wewoka
WHITE, J. H. — Wewoka

TILLMAN COUNTY

BOX, O. H. — Grandfield
COLLIER, E. K. — Tipton
FOSHEE, W. C. — Grandfield
FRY, F. P. — Frederick

Correction

TABOR, GEO. R., Oklahoma City, instead of Geo. O. Tabor.

THE JOURNAL
OF THE
Oklahoma State Medical Association

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Vol. XXXI JULY, 1938 Number 7

DR. L. S. WILLOUR.....Editor-in-Chief
McAlester, Oklahoma

DR. T. H. McCARLEY.....Associate Editor
McAlester, Oklahoma

Entered at the Post Office at McAlester, Oklahoma, as second-class matter under the act of March 3rd, 1879.

This is the official Journal of the Oklahoma State Medical Association. All communications should be addressed to The Journal of the Oklahoma State Medical Association, McAlester Clinic, McAlester, Oklahoma. $4.00 per year; 40c per copy.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost provided request for them is attached to manuscripts or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in The Journal the manuscript will be returned to the writer.

Failure to receive The Journal should call for immediate notification of the Editor, McAlester Clinic, McAlester, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes of addresses, births, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application.

It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

Printed by News-Capital Company, McAlester.

EDITORIAL

WHY SUPPORT ORGANIZED MEDICINE?

The year covered in the report of the Board of Trustees of the A.M.A. has been characterized by a very notable expansion in the activities of the various councils, bureaus and departments of the Association until, at times, available facilities have been seriously strained. A constantly growing interest on the part of the general membership in changing social conditions; increased efficiency of medical organization in counties and states throughout the nation; a more active and intelligent interest on the part of the public in matters pertaining to public health and medical service; legislative activities in the states and in the federal government; the consideration of important questions pertaining to medical education, hospital operations and the extension of public health programs; greater financial and administrative participation on the part of the federal government in public health affairs in states and in communities; proposals for the development of medical and hospital service plans for the benefit of the members of low income groups and actual operation of such plans, and a notable increase in the number of members of the Association together with many other important factors have brought into the headquarters offices a veritable flood of inquiries and demands for information and service. An earnest effort has been made to meet such demands as fully and as helpfully as possible.

The gross earnings of the Association for 1937 were $1,654,203.74; operating expenses were $982,830.10. The operation of the Council, bureaus and departments amounted to $431,635.63. Incidental expenses, including insurance, taxes, building expenses and depreciation, fuel, legal services and special publications amounted to $218,601.19, showing a net income of $122,242.92, of which sum $83,563.74 represents income from investments, so that the actual net operating income was $38,679.18.

The place held by the Journal of the American Medical Association in the field of medical periodicals is now so well established that it is unnecessary to offer comment on this point. In the State of Oklahoma there are 951 subscribers to the Journal; however, there are only 685 Fellows.

The special Journals published by the American Medical Association were published at a loss of $25,958.37 to the Association in 1937, while Hygeia was published at a loss of $31,004.90.

The Cooperative Medical Advertising Bureau earned on advertising contracts secured, $156,705.47, rendering to the participating Journals most valuable service.

The Council on Pharmacy and Chemistry, Foods and Physical Therapy have been closely correlated. The work of the Council on Pharmacy and Chemistry has been greatly increased during the past year on

account of the submission of a large number of products by manufacturers and the nature of the investigation made, and for the further reason that the activities of the Council are being more fully supported by the medical profession generally.

An important series of articles dealing with diet, prepared by highly qualified investigators are being published under the auspicies of the Council, these later to appear in book form.

The endocrine principles and new therapeutic substances of various kinds have required prolonged and intensive consideration. The Council on Physical Therapy has established standards for acceptable audiometers and has given careful examination of short wave and diathermy apparatus.

The Council on foods has made every effort to promote truthful advertising of wholesome food products and has had the benefit of the services of a number of distinguished scientists in conducting necessary scientific investigations.

The Chemical Laboratory in the past year carried out an important accomplishment as a result of investigations of the poisonous effects of a product known as Elixir of Sulfanilamide, when it was established that at least 76 deaths were due to this product, and the toxic agent was found to be diethylene glycol. Much work has been done in the laboratory to establish standards for important therapeutic products.

The Bureau of Legal Medicine and Legislation has been very active during the past year supporting the enactment of the National Cancer Institute Act, the Marihuana Tax act, an act authorizing the Bureau of Mines to manufacture and sell helium gas for medical and other non-governmental uses, and an act devolving on the Federal Trade Commission jurisdiction over the advertising of foods, drugs, diagnostic, therapeutic devices and cosmetics. Efforts to arouse interest in the establishment of a Federal Department of Health have been unproductive.

The Council is closely in touch with all Federal Legislation such as legislation pertaining to vivisectionist, social security act, federal income tax act and the legislative problems of the various states.

The Bureau of Health and Public Instruction has carried on an extensive program throughout the year. The dramatized radio program conducted with the cooperation of the National Broadcasting Company completed its second successful season in 1937. The Bureau has cooperated as fully as possible with official agencies concerned with the protection of scientific research. The Director and the Assistant Director of the Bureau have appeared before a larger number of audiencies than in any previous year. The educational publications issued under the direction of the Bureau have been widely distributed.

The Bureau of Medical Economics is conducting a survey of need for medical care and in this survey it would be necessary that every State and County Medical Society heartily cooperate, as this information will be very necessary to determine the exact need for any change in the plan of medical practice. This Bureau has also investigated the many forms of medical practice, and has made extensive study of group hospitalization and workmen's compensation. They have also looked into the Insurance Medical Directories and advised physicians not to be victimized by publishers of pay-as-you-enter insurance medical directories.

Many articles and abstracts pertaining to medical economic problems have been prepared by the Bureau.

The Bureau of Investigation received and answered from 10,000 to 12,000 communications during the year. This Bureau has continued its cooperation with medical societies and other professional groups, and with Federal, State and City governments.

The Bureau of Exhibits reports that at the Atlantic City session there were 254 exhibits, the largest that has ever been shown. There were special exhibits on fractures and anesthesia, which were outstanding successes. Association exhibits, dealing with the activities of the Association, were sent out on 115 occasions to 33 states. Through exhibits approximately 3,500,000 persons were reached, including

the Cleveland and Dallas expositions. The demand for motion pictures has been constant and the new film on syphilis has been received with much favor.

The foregoing sketch from the complete and comprehensive report of the Board of Trustees is being published editorially in your Journal in order that you may develop some idea of what the American Medical Association means to the individual doctor. It would be well if every physician could read the entire report and he would then be convinced that without the A. M. A. and its component organizations the problems of the practitioner of medicine would be even more intricate than they are at present. This parent Association deserves the support of every regular practicing physician and can only be supported by your membership in your County and State Association and Fellowship in the A. M. A. All of the benefits that come from the parent association we take as a matter of course. Some, however, are so thoroughly convinced of the importance of the work done that they subscribe to its support, while in Oklahoma there are some 1,600 doctors who are deriving these benefits and contributing n o t h i n g. In other words they are not paying their way —just hitch-hiking along the highway of Organized Medicine.

RE-PRINTS OF ARTICLES

There seems to be some confusion as to when reprints of articles published in the Journal can be acquired.

When an author is furnished with proof of his article there is always a slip enclosed for ordering reprints, with prices indicated. If the author wishes reprints they must be ordered at this time, because the forms are torn down almost immediately after publication of the current issue of the Journal. Late orders, consequently, cannot be filled unless the author would wish to go to the expense of having the article re-set.

Report of Committee on Study and Control of Tuberculosis

In view of the fact that less than 20 per cent of tuberculosis cases are discovered, or admitted to sanatoria, in an early stage of the disease, it is apparent that physicians need to be more alert to early diagnosis. Certainly prospects for successful home care is greatest the sooner the disease is found.

A factor now favorable to the family physician is widespread public education about tuberculosis, thereby increasing the willingness of patients to accept a decision in early diagnosis. Another factor bringing the tuberculosis problem into the hands of the family physician is that the people are learning that infection in children may be discovered in advance of disease, and that such children need supervision and care to prevent active tuberculosis.

With the situation in regard to tuberculosis as herein outlined, encouraging a back-to-the-physician movement, the family doctor may logically play a more prominent part in its control. Therefore, we urge physicians to use routinely all modern diagnostic methods for the discovery of tuberculosis in the early stages. Also, at regular intervals checking known cases and contact cases in the home to determine progress and whether or not other members of the household have become infected. Furthermore, with our citizenship recognizing tuberculosis as still a national and local problem, the medical profession will gain in public esteem in taking a more active part in meeting it.

Carl Puckett, Chairman.
Will C. Wait.
L. J. Moorman.

Editorial Notes—Personal and General

DR. LEE K. EMENHISER announces the opening of his office at 1106 Medical Arts Bldg., Oklahoma City, having completed a two-year house service in Ear, Nose and Throat at Barnes Hospital, St. Louis. He was former head of the Department of Anatomy of the School of Medicine, University of Oklahoma.

DRS. FRED G. DORWART and HALSELL FITE, Muskogee, were the guests of the Pittsburg County Medical Society, June 17th. Their subjects were "Diuretics—Statistical Studies of" and "Urology in Children," respectively.

DR. and MRS. H. A. LILE, Cherokee, have returned from a vacation trip into the Rockies.

DR. and MRS. H. E. HUSTON and daughter, C h e r o k e e, are visiting relatives in Wenatchee, Washington.

DR. and MRS. ELTON LEHEW and children, Pawnee, are visiting in Galveston, going from there by boat to New York City.

DR. and MRS. JOHN F. PARK and children, McAlester, spent two weeks in June in Galveston.

Practice-Equipment For Sale

The practice, office equipment, and the office of the late Doctor H. L. Hille of Collinsville, Oklahoma, is for sale. In Collinsville and for an area of approximately 50 square miles around there, there is no other physician. This should be a good opportunity for some young physician.

The practice, office equipment, and the office of the late Doctor J. E. Adams, Cushing, Oklahoma, is for sale. This is an excellent opportunity for some young physician. If interested address Mrs. J. E. Adams, Box 507, Cushing.

OBITUARIES

Dr. C. M. Bloss, of Okemah, died at Okmulgee Hospital, Okmulgee, June 14th. He was born May 24th, 1878, at Clay Center, Kansas, and attended grade and high schools there, and the University of Oklahoma at Norman. On May 30th, 1908, he graduated in Medicine from the University of Texas Medical School. He practiced medicine in Okemah for 25 years and was a most useful citizen. A member of the First Presbyterian church, and an Elder in his church; a member of the Masonic fraternity; a member of the Oklahoma Medical Association for many years and at the time of his death he was secretary of the Okfuskee County Medical Society. He also held membership in the American Medical Association, Southern Medical Association, Okemah Chamber of Commerce, American Legion (Okemah Chapter), and Kiwanis Club.

Notice of Recent Deaths

(Insufficient data for obituary)

Adams, J. E., Cushing, Oklahoma, May 31, 1938.

Hille, H. L., Collinsville, Oklahoma, May 31, 1938.

Beg Your Pardon

OKMULGEE-OKFUSKEE County Medical Societies were reported, in a recent issue of the Journal, as having as their guests Drs. J. C. Brogden and E. G. Hyatt, of Oklahoma City. These doctors are from Tulsa, Oklahoma.

Need of Redetermining Schick Negativeness in School Children

A. B. Schwartz and F. R. Janney, Milwaukee (Journal A. M. A., May 21, 1938), state that during the last year or two there has been an apparent increase in the incidence of diphtheria among supposedly Schick negative children. These occurrences warrant serious consideration of the present status of Schick immunity in the present large school population. As it is now the practice to immunize against diphtheria at about nine months of age and to perform a Schick test within the following several months, many school children have had an interval of five years or more following the immunization procedure by the time they enter school. The importance of a Schick test following the immunization procedure has been repeatedly emphasized, but, once a negative Schick test has been obtained, the immunity has been generally assumed to be permanent. Whatever materials or method of immunization is followed, the immunity of the school child to diphtheria should be insured by either a routine Schick testing on all children entering school or by the administration of a routine dose of 1 cc. toxoid at the time of entering school, as suggested by Fraser and Brandon. In order to maintain the low incidence of diphtheria in the United States, one of these two measures should be made a routine part of preventive medicine.

Noise and its Effect on Human Beings: Noise Control as a By-Product of Air Conditioning

In their dissertation on noise and its effect on human beings Carey P. McCord, Detroit; Edwin E. Teal, Ann Arbor, Mich., and William N. Witheridge, Detroit (Journal A. M. A., May 7, 1938), conclude by saying that the American Medical Association's Committee on Air Conditioning recognizes that proper air conditioning is one factor tending to diminish the ill effects of noise of some types. The procurement of closed windows, doors and other sound barriers commonly associated with artificial climates in public buildings, office buildings, department stores, theaters and so on may eliminate as much as 75 per cent of the noises of extraneous origin. In industry, air conditioning offers little promise of protection against noise for workers employed near the origin of noise. Vibration in ranges below audibility has a prominent role in the production of injuries arbitrarily classed as noise diseases. Although inaudible vibrations may involve occupied areas that may be air conditioned, obviously no protection can be secured from such vibrations by air conditioning. The compilation of material making up this report presents extensive evidence that genuine injury is widespread as a result of noise action and that noise deafness is the chief of these dysfunctions in terms of both frequency and severity.

Multiple Primary Malignant Tumors

J. S. Eisenstaedt, Chicago (Journal A. M. A., June 18, 1938), reports the case of a man who died in 1936 and who had been operated on 21 years before for adenocarcinoma of the kidney. Later two other primary cancers developed in distinct and separate organs (prostate and sigmoid colon), one of which, that of the prostate, produced metatases to the lungs and lymph nodes. All three cancers were diagnosed clinically. It is the author's belief, after a rather complete survey of the literature, that: 1. Multiple primary cancers are more frequent than are reported. 2. They occur more frequently than chance alone would explain. 3. More percentage of multiple primary malignant tumors to be reported in the future will be higher than that recorded in the past, because: (a) More people are reaching advanced years, a period in which the incidence of cancer is generally high. (b) Since the inauguration of cancer clinics and commissions throughout the world, cancer patients have been more concentrated and more thoroughly studied. (c) Better results are being obtained in the treatment of cancer than heretofore. (d) As a result of longer survival after treatment for a single primary tumor, time is afforded for the development of subsequent primary cancers. (e) Autopsies are more widely done and with greater thoroughness than in the past. 4. Some factor, as yet unknown, possibly hereditary or hormonal in nature, plays an important part in susceptibility to malignant disease and the varied responses to environment in different individuals depends on this unknown element.

Cystic Hygroma of the Neck

Since hygromas of the neck rarely develop in adults Bruce L. Fleming, Philadelphia (Journal A. M. A., June 4, 1938), reports two adult cases that have been treated for this condition in the Jefferson Hospital since 1908 and in summary states that hygromas of the neck are thin-walled cystic tumors linew with endothelium and containing lymph. They grow from lymph sacs or buds that appear, in embryologic development near the junction of the internal jugular and subclavian veins. The endothelial cells lining these tumors arestructurally different from and thicker than those lining lymphatic capillaries. They are structurally the same as blood capillary endothelial cells, which they resemble functionally, for they apparently produce the contained lymph. Evidence of phagocytic power is negligible. The treatment is complete surgical excision or partial excision and packing.

ABSTRACTS : REVIEWS : COMMENTS *and* CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments from
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

The Treatment of Suppurative Cutaneous Wounds and Ulcerations with Cod Liver Oil and Allantoin; Salzmann and Goldstein; American Journal of Surgery; June, 1938; Page 52o.

The use of living maggots and insects in the treatment of osteomyelitis, abscesses and non-healing wound infections dates back to antiquity. However, it is hardly likely that the medical men of old recognized the therapeutic value inherent in the maggot.

Allantoin, in the form of living maggots and extract of maggots, has been employed with remarkable success in the treatment of chronic cutaneous ulcerations, chronic osteomyelitis, severe burns and various dermatologic conditions.

Considerable evidence is available attesting to the beneficial effects of cod liver oil in the treatment of chronic non-healing wounds and chronic ulcerative affections.

The successful therapeutic use of cod liver oil and allantoin suggested a combination of these substances to obtain a double therapeutic action greater than the effect produced by either alone. It was found that such a combination with the addition of phenol was extremely effective in stimulating granulation tissue and encouraging healing in chronic ulcerative affections.

The ointment employed in this study contained 45 per cent cod liver oil, 2 per cent allantoin in a lanolin base with 0.5 per cent phenol.

Deep indolent ulcerative conditions and various cutaneous inflammatory affections respond promptly to applications of cod liver oil-allantoin ointment. The therapeutic procedure is simple and may be applied without any discomfort to the patient. It is tolerated better by the patient than the use of the actual maggots.

The preparation of cod liver oil-allantoin employed in this study is known as codalltoin and was made available through the courtesy of the Amfre Drug Company, New York.

LeRoy D. Long.

Mandelic Acid Therapy in the Treatment of Urinary Tract Infections; George H. Ewell; Editorial in Wisconsin Medical Journal; December, 1936.

"The introduction of a new drug in the therapy of urinary tract infections is always received with great enthusiasm in most quarters since the treatment of these infections is generally so disconcerting and the results generally unsatisfactory. Most of the drugs introduced are sponsored and advocated by the firms manufacturing them and must be accepted by the profession until their clinical value is established.

"The introduction of mandelic acid by Rosenheim, in the treatment of urinary tract infections, which came about in his efforts to overcome certain objections to the ketogenic diet is a recognized therapeutic procedure, and, as has been pointed out, its efficacy depends upon the production of and the presence in the urine of a sufficient concentration of betaoxybutyric acid with the urine at a certain degree of acidity, the action of the acid being bactericidal and bacteriostatic. Sufficient concentration of this acid cannot always be obtained by dietary means, and efforts to supplement it by its administration were not satisfactory, since under normal metabolic conditions it is completely and rapidly oxidized in the body.

"Rosenheim employed several of the acids of this series attempting to find one which was not so easily oxidized, was non-toxic in adequate dosage, and would be excreted in the urine unchanged. Mandelic acid was the one chosen, and he employed the sodium salt for administration. The clinical results were very satisfactory.

"Again it is necessary for the urine to be acid to a certain degree. In some cases the drug will produce this degree of acidity, in others it is necessary to administer other acidifying agents such as ammonium chloride and nitrate; the acidity must be checked by a suitable indicator, and the common litmus paper is not satisfactory. Unless the proper acidity is obtained, satisfactory results cannot be expected.

"The majority of urinary tract infections are due to the organisms of the colon bacillus group. The members of this group are definitely sensitive to its action, exceptions being made for the Proteus and areogenes strains which are resistant.

"Impairment of kidney function may follow its administration; also gastro-intestinal disturbances. Its employment, therefore, must be supervised. The sodium and ammonium salts are the most commonly used and obtainable through the regular drug channels.

"The drug is expensive but not more so than the various dyes that have been introduced, and from the available clinical reports the results are much superior. The clinical reports are so encouraging as to warrant continued clinical trial."—G.H.E.

LeRoy D. Long.

The Postoperative Treatment of Exophthalmic Goiter; Lindon Seed; Clinical Medicine and Surgery; June, 1938; Page 258.

Immediately after an operation for exophthalmic goiter the patient needs: (1) fluids; (2) sugar; (3) morphine; and (4) iodine. The administration of these four substances constitutes 90 per cent of the postoperative treatment. Since, after this is carried out, there is very little else that one can do, it is imperative that it be carried out well.

Fluids: The fluid requirement after a thyroidectomy for exophthalmic goiter is larger than that after almost any other operative procedure. Three thousand (3,000) cubic centimeters of fluid in the first 24 hours is probably the minimum; 4,000 cc. is better; and 5,000 cc. is needed under many cir-

cumstances. The ease with which fluids can be given by the intravenous or the subcutaneous route often leads to disregard of the more effective administration by the oral route. In addition to the fact that no one as yet has devised a better way of giving fluids than by mouth, it seems that a glass of water, taken into the stomach, is more useful to the organism than twice that quantity injected under the skin or into a vein. Since after a thyroidectomy the gastro-intestinal tract is intact and uninjured, little caution need be exercised in the oral administration of fluids. A persistent effort will usually overcome the two obstacles to administration by this route—difficulty in swallowing, and vomiting.

The difficulty in swallowing begins soon after the operation and reaches its maximum in about 24 hours. Consequently the administration of fluids should be begun as soon after the operation as possible, for the effort to swallow will be more successful within the first 12 hours than in the second 12 hours. The tendency for the liquid to enter the larynx, causing a paroxysm of coughing, is greater when the patient is in a semi-reclining position than when she is in an erect position. The distress is only a little greater on boldly and quickly swallowing a large quantity of water than on sipping a few drops at frequent intervals. If the patient is instructed to sit up in bed, take a glass of water in her hand and drink it, distressing though it may be, she will usually succeed in drinking half a glassful. If a fit of coughing starts some bleeding, the surgeon will automatically be more careful of the hemostasis in future operations.

Vomiting, the second hindrance, is due in part to anesthesia, in part to the disease itself, and occasionally to morphine. Withholding of fluids by mouth does not lessen the vomiting; on the contrary, the patient will feel happier if she has something in the stomach to vomit, and the resulting involuntary lavage may stop the vomiting. A change of liquids is helpful; one of the carbonated beverages, especially ginger ale, may be satisfactory.

If the vomiting persists, one must turn to one or more of the three remaining methods of administering fluids. Of these methods, proctoclysis is the most inaccurate, but has the virtue of being the least distressing. If a proctoclysis is continued intermittently for 24 hours, the patient will nearly always absorb at least one liter. Physiologic saline solution is better than plain water, for it will counteract the hypochlorhydria not uncommonly resulting from the loss of chlorides due to excessive sweating. Venoclysis is, in many ways, preferable to hypodermoclysis, but it has one serious drawback in that, when the patient is extremely ill (when one most earnestly wishes to use the intravenous method), she is so restless that the needle cannot be maintained in the vein.

Sugar: Sugars are most effectively g i v e n by mouth. If the nurse will shift from grape juice to orange juice, to lemonade, or to ginger ale, the amount of sugar that will be taken in will be surprising. If vomiting prohibits oral feedings, the sugar must be given parenterally. The absorption of dextrose administered by proctoclysis is very uncertain. A five per cent solution of dextrose in physiologic saline solution is readily absorbed when given by hypodermoclysis; 2,000 cc., administered in the first 24 hours, will usually be adequate. If it is given intravenously, the sugar may easily appear in the urine when the rate of administration is too fast. To increase the nourishment, the intake of food is increased as rapidly as possible, and everything that the patient will eat is included.

Morphine: Morphine is essential for rest. Hypodermic injections of 1/6 grain (0.01 Gm.) should be used freely. If the patient has an idiosyncrasy and becomes restless or vomits, a grain (0.06 Gm.) of codeine forms an excellent substitute.

Iodine: The administration of iodine should be continued for at least a week following the operation. Its withdrawal is not a calamitous blunder, but it can be followed by a sharp exacerbation of the symptoms several days later. The iodine can be conveniently given on the first day in the form of Lugol's solution (100 drops) in the proctoclysis, or as sodium iodide, 15 grains (0.9 Gm.) in the hypodermoclysis or venoclysis. On the second day, Lugol's solution can again be given by mouth. It is continued as long as the physician sees fit — as long as there is any doubt in his mind as to whether the thyrotoxicosis is completely controlled. The drug can do no harm and may be of some benefit. If it seems advisable to give it over a long period of time, the dose should be reduced to five drops once or twice daily.

Following the operation the patient is placed in bed in a semi-sitting position. If the position is comfortable, it is maintained; if not, there is no reason why it cannot be altered. The peak of the postoperative reaction is usually reached on the second night. On the third day the patient's comfort will be enhanced and recovery hastened if she is allowed to be out of bed. At this time neuralgic pains about the occiput, in the front of the chest, or in the teeth may be very troublesome. A standing order for one grain (0.06 Gm.) of codeine sulphate and 10 grains (0.6 Gm.) of acetylsalicylic acid, either or both or any part of either or both, whenever necessary, will be found very comforting to both the patient and the physician.

Comments: This is a commendable dissertation on the average routine care of postoperative toxic goiter patients in so far as the administration of these four important substances is concerned.

Personally we never use glucose solution in any percentage under the skin. It is probable that five per cent solution of glucose in physiologic saline solution will not cause sloughing, but we have seen sloughing when glucose was used by others and we see no good reason for administration of glucose under the skin in the average case.

I am also prejudiced against the use of salicylate with these patients.

The author covers other phases of the postoperative care of exophthalmic goiter patients in his article such as crisis, hemorrhage, obstructive dyspnoea, and tetany. In general his ideas conform to those generally accepted.

LeRoy D. Long.

Trichomonas Vaginalis Vaginitis, A Comparative Study of Treatment and Incidence: Paul Peterson; American Journal of Obstetrics and Gynecology; June, 1938; Page 1004.

This report was made with a threefold purpose: (1) To present the figures of occurrence of true pathogenic cases, and of incidental cases discovered by routine examination for trichomonas vaginalis; (2) to review the treatment of trichomonas vaginalis vaginitis; and, (3) to report a case of trichomonas vaginalis proctitis.

Routine search was made for trichomonas vaginalis in all patients visiting the Obstetrical and Gynecological Clinic of the United States Naval Hospital, San Diego, California, with a total of 5,712 obstetric and gynecological patients being examined routinely.

It was found that 24.6 per cent of all patients examined had positive smears for trichomonas vaginalis whereas only 15 per cent of these patients

(3.69 per cent of the total number) had clinical symptoms.

On the basis of these findings the author is led to believe that the pathogenicity of the trichomonad is generally exaggerated.

In post-partum cases the incidence was 33 per cent as compared to 20.3 per cent in the antepartum cases which is at slight variance with the general belief about the incidence of this type of infestation.

Some patients had a left lower quadrant pain and painful coitus with no other findings to account for it and the author speculates as to the possibility of patients with such symptoms having infestation of the rectum and sigmoid as in a particularly virulent type of proctitis described and reported in this article.

"Routine examination accounted for 64 per cent of the cases being found; 15 per cent were recognized clinical entities; 0.21 per cent occurred with a pathogenic abundance of Doderlein bacilli; 12.455 per cent were associated with gonorrheal endocervicitis; 8.26 per cent had a nonspecific endocervicitis; and 0.075 per cent occurred with monilia infection."

The treatment of 1,405 patients is reviewed. Three types of treatment were employed designated as carbarsone, vioform, and silver picrate methods. All these methods are given in detail. The author prefers the silver picrate method because he feels it is simple, effective and time saving and was employed in his series in 695 patients with no failures. In this group 80 per cent were cured with one course, 20 per cent required two courses and there were no failures.

In the carbarsone group 73 per cent were cured with one course, 25 per cent required two courses and 1.3 per cent were not cured after two courses and were considered failures.

With the vioform treatment 76 per cent were cured with one course, 23 per cent required two courses before remaining negative and 0.2 per cent were considered failures.

They considered an average course of treatment about 42 days and smears were taken following each of three menstrual periods.

Comments: By far the most interesting fact contained in this article is in relation to the pathogenicity of trichomonas vaginalis with the surprisingly large number of patients having positive smears with no symptoms and discovered only by routine examination.

The discussion and results concerning treatment are also of importance in several directions. In the first place, the treatment of trichomonas vaginalis vaginitis is more clearly defining itself and becoming crystalized in recent years. In the second place, one must agree with this author that the simplest possible means of treatment is probably more often applied correctly and, therefore, is superior.

The three methods of treatment outlined in this article closely parallel each other in results though the figures indicate a slight advantage in the use of silver picrate method. However, the manner of employing the carbarsone treatment in their clinic was a rather elaborate one and may not have given as satisfactory results if more simplified.

For a number of years I have depended upon the parasitocidal action of carbarsone as the primary factory in treatment and have studiously avoided any washing or trauma of the vagina in treatment of instances of trichomonas vaginitis. Such patients have been instructed about the introduction of carbarsone vaginal suppositories one each night before retiring for 12 nights. Following the use of such suppositories, with negative vaginal smears, floraquin tablets have been used one each night for 12 nights and usually one every other night for an additional 24 days, principally to maintain an increased acidity within the vagina. The results have been far more satisfactory in my hands than any former procedure employing local treatment and consequent inevitable vaginal trauma. The employment of the floraquin tablets has practically eliminated recurrences and the carbarsone vaginal suppositories alone have usually controlled symptoms within three to four days. Douches have been employed only for symptomatic purposes and if used, are employed in the evening before the carbarsone suppository is inserted.

Wendell Long.

A Comparison of the Three Types of Hysterectomy; Curtis H. Tyrone, New Orleans, La.; Annals of Surgery; May, 1938; Page 836.

This is a report based upon 764 consecutive operations performed by the late Dr. C. Jeff Miller and the author during a six-year period, 1931 to 1936, including ward and private patients.

The indications for hysterectomy are briefly reviewed and the pathological conditions found in operation in this series are tabulated with uterine fibroids and uterine fibrosis and chronic metritis composing the greatest incidence with 382 and 238 instances respectively.

Of the 764 hysterectomies 316 were supravaginal hysterectomies, 137 complete abdominal hysterectomies and 311 vaginal hysterectomies.

The mortality for the different types was: supravaginal, 1.9 per cent; complete abdominal, 2.2 per cent; and vaginal, 0.64 per cent. The mortality for the entire series was 1.4 per cent. The relatively large number of vaginal hysterectomies in this series is interesting as is also the fact that upon the basis of these statistics vaginal hysterectomy yielded lower morbidity and mortality and would, therefore, seem the operation of choice whenever it can be performed and is indicated.

However, the author is very emphatic that the patients for vaginal hysterectomy must be carefully and properly selected and the operation must never be used when extensive adnexal disease is present.

It is also an interesting fact that in more than half of the fatal cases peritonitis was the cause of death. In all of these patients there was extensive adnexal and parametral infection present at time of operation and the author emphasizes the danger of hysterectomy in the presence of such infection.

Comment: Such statistical reports relative to the employment of the various means of performing hysterectomy are of some importance in indicating the trend of surgical thought and approach. However, the use of the different surgical approaches for hysterectomy depends upon a number of factors and the choice of procedure as well as the indication for operation, must in the last analysis depend upon the individual circumstances of the patient's condition, the experience of the surgeon, and the associated lesions which are to be corrected at the time of operation.

The importance of proper preparation of all patients before surgical procedures, including hysterectomy, cannot be too emphatically recalled, if one is to expect a low mortality as well as good postoperative results. In this article the author has called attention to the careful preoperative control of pelvic inflammation as far as possible before operation is attempted. Equal importance can be

assigned to the proper supportive measures preoperatively such as replacement of blood loss and improvement of the patient's general condition wherever this is possible before a major surgical operation is undertaken.

Wendell Long.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M.D.
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Rehabilitation of the Deaf Child. Dr. Max A. Goldstein, St. Louis. The Laryngoscope, April, 1937.

A general survey of the 50,000,000 children of school age in the United States showed:

40,000 Blind.
60,000 Totally deaf.
80,000 Partial-sighted.
300,000 Crippled.
3,000,000 Hard-of-hearing.
4,000,000 Defective in speech.

Or a total of 7,480,000 or nearly 15 per cent physically defective; mental defectives and other subnormal groups were not included in the survey.

The training of the deaf child is much more difficult than that of helping the hard-of-hearing child. The latter has acquired speech although it may be imperfect. Making contacts in and out of school presents the greatest problem due to the impaired hearing. Lip-reading and speech conversation are of paramount interest to this type of patient. Hearing aids are also useful.

The author tells of a class reunion of pupils from his Central Institute for the Deaf. The class was made up of 45 young men and women. Talking movies were made of the group as evidence of a successful rehabilitation.

The article re-emphasizes the fact that an Otologist has not completed his duty to his patient until he has successfully interested him in the technique of carrying on his life even though he is gradually becoming more hard of hearing or is totally deaf.

Treatment of Chronic Catarrhal Deafness With the Eustachian Heat Bougie. Emanuel Simon, M.D., Albany, N. Y. Archives of Otolaryngology, May, 1938.

The author presented a paper three years ago on this subject. He continues and reports the further development of this technique in his present article. The only way to tell whether or not this treatment will improve the patient's hearing or diminish the tinnitus is by trial. The article is very interesting and leaves the reader with the impression that the author is firmly convinced that his procedure is sound. The author's own summary is as follows:

1. Use of the heat bougie will open the eustachian tube for longer intervals than any other procedure. Opening up the eustachian tube helps only those patients who have no scar tissue in the middle ear restricting movement of the ossicular chain.

2. Chronic hyerplastic sinusitis is an extremely prevalent disease. Chronic nonpurulent otitis media is very common and is probably dependent on chronic nasal infection or chronic sinus infection (with its occasional acute flare-ups) for its source. These inflammatory processes are present in varying degree in most adults; they may exhibit no symptoms, slight symptoms or marked symptoms.

3. Chronic so-called catarrhal deafness may be helped by improving the rhinosinal mucosa and by direct treatment of the eustachian tube. Unfortunately, there is at present no known specific way to cure chronic sinusitis. One can, by various empiric methods, improve the condition of the mucosa in the nose and in the sinus to some degree, in most cases for a limited time, and thereby alleviate or temporarily stop the inflammatory process in the ear.

4. Direct treatment of the eustachian tube, particularly with the heat bougie, is of value in many cases of chronic catarrhal otitis media, but not in all, since it does not remove ossicular restriction. Aeration of the middle ear does help some patients, even if only temporarily; it seems to tide others over acute tubotympanic catarrh, leaving the ears apparently well thereafter. In some cases the condition gets worse regardless of all treatments. This is because one is unable to halt the course of hyperplastic sinusitis which is the source and cause of chronic progressive otitis media.

Naso-Pharynx Pathology After the Adenoid Period. C. C. Reid, M.D., Denver, Colo. The Eye, Ear, Nose and Throat Monthly, June, 1938.

The "adenoid age" is designated at from two to 14 years. By this the author means the time in life when the adenoids do the most harm to the body and also when they are most often surgically removed. He suggests that this period might well be extended from the time of birth to 30 years of age.

The author's opinion is that adenoids are frequently incompletely removed. If the LaForce instrument is used in their removal, then a wise procedure would be to follow with a Stubb's curette and lastly an inspection and completion of the operation with the operator's finger. If completely done the results are apt to be permanent.

Remnants of the adenoids probably cause pathology over a long period of years evidenced by infections, fevers, rheumatism, catarrh, sinus disease, deafness, heart disease, nephritis, diabetes, inefficiency and other complications. The pathology may be found in the naso-pharynx and throat. Repeated cold may produce a hyperplasia of the lymphoid tissue which in turn becomes and remains infected. The Fossa of Rosenmuller may become almost completely filled and extend down the sides of the throat to occupy the lower part of the fossa of the faucial tonsil, even after complete removal of the tonsils. Infected nodules often occur on the posterior wall of the pharynx. Absorption and trouble equal to that of a diseased tonsil not infrequently is the result. Adhesions may form between the turbinates and the septum. Synechia in region of the Fossa of Rosenmuller may cause the drainage to accumulate in the naso-pharynx. The formation of a plastic exudate may cause the lips of the Eustachian tube to adhere. Turgescence, hypertrophy and lymphoid hyperplasia may cause partial or total, continuous or intermittent, closure of the Eustachian tubes. So may be produced after a number of years a chronic progressive deafness due to obstruction.

The symptoms produced depend largely on the amount of pathology present. Mouth breathing may be produced by pathology in the naso-pharynx but it may also be produced by such nasal conditions as deformity or hypertrophy.

According to the author the word "catarrh" means "flowing down." Literally a running nose or a dropping into the throat. Unhygienic living, errors of diet, constipation, etc., in addition to a pathological condition in the naso-pharynx will produce this. Because there is not free drainage

and ventilation present, a chronic rhinitis many times persists. Frequent colds complicated by sinus infections are not uncommon. The temperature may persist, day after day, for several weeks. The patient will often complain of a feeling of obstruction in the nose. Deafness is one of the later symptoms. Polypoid degeneration is another late evidence of the condition.

The treatment is cleaning up the naso-pharynx. A general anaesthetic is recommended. The author stresses what he terms "finger surgery."

Mycotic infections in Otolaryngology. William D. Gill, M.D., San Antonio, Texas. Southern Medical Journal, June, 1938.

The history of the bacteriology of mycology and the microscopic forms of vegetable life is briefly reviewed.

Pathogenic or non-pathogenic fungus may occur on the surfaces of the oral, pharyngeal and nasal mucous membranes as well as in the larynx, trachea and bronchi. Extension into the lung tissue is not uncommon. Varieties of importance to the otlaryngologist are the Actinomyces, the Blastomyces with their subdivisions, the Torulae, Oidia, Monilia and Saccharomyces, as are also the Aspergilli, Penicillia, Sporotrichi, Leptothrices and the Mucoraceal.

It seems some persons have an immunity to mycotic infections while others are especially susceptible to them.

The Oidia type of infection is probably the most commonly seen, occuring usually in infacts (Thrush). Various pathogenic fungi infecting the skin of the external auditory canal has been designated as an otomycosis. It is of frequent occurrence. The presence of cereumen usually exerts a restraining influence against the invasion of fungi. However instances have been recorded where the fungi seemed to be actually flourishing on and in a ceruminous plug.

The prognosis is good if the initial focus is given early and vigorous treatment. The greatest danger is the extension from the focus of infection to deeper organs such as lungs and sometimes the central nervous system. Reinfections are prone to occur, especially those involving the ear. "In certain regions it is almost axiomatic to say that the reopening of swimming pools is a harbinger of the mycotic ear infections of the warmer months."

The treatment is esentially iodine or iodides and some form radiant energy such as X-ray. Particularly is this true of the infection in the air passages. Not such good results have been obtained in treating leptothricosis of the tonsil.

Torulosis, moniliasis and coccidiosis respond with varying degrees of success to vaccine and filtrates, autogenous. The author likes to use these as an adjunct with other forms of treatment. Usually when the general involvement is seen late, any treatment is ineffective.

Various treatments and drugs are discussed. In the author's experience, in order of clinical effectiveness, he recommends the following: (1) metacresylacetate or cresatin, (2) tricresol in glycerine, (3) Castellani's solution, (4) iodine in petrolatum or boric acid powder, (5) phenyl mercuric nitrate 1/3,000 alcoholic solution, (6) copper salts, such as copper sulfate, chloride, and oleate.

Essential points in treatment of otomycosis: (1) control of pain, (2) the control of the mycotic infection, (3) the prevention of reinfection. The use of the wick in the external auditory canal is preferable, moistened with the solution. After 24 hours, the canal is cleansed of debris. If water is used this must be carefully removed.

A long bibliography is appended to the article.

PLASTIC SURGERY

Edited by
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Reconstruction of Deformed Chin and Its Relationship to Rhinoplasty; Dermal Graft—Procedure of Choice. Jacques W. Maliniac, M.D., New York City. American Journal of Surgery, June, 1938.

The author points out that reconstructive rhinoplasty has come to be a common surgical procedure. With this popularity, however, attention is being focused on concomitant abnormalities of other components of the face and their relationship to the nose. The author points out that the chin should harmonize with the nose and profile.

Causative Factors: Under development of chin, trauma, scar formation, malocclusion, factors involving the jaw bone, teeth or temporomandibular joint.

Procedures in Use: (1) Ivory implant. (2) Bone graft. (3) Cartilage graft. (4) Fat graft. (5) Dermal graft.

The author points out the objection to ivory implant; principally that it is too hard, and second, that it is less suitable than auto-plastic grafts. Also he states that bone or cartilage gives an abnormal hardness, especially to touch about the chin. He favors, above all, the dermal graft for the reconstruction of the receding type of cnin and the cartilaginous graft for the under-developed chin.

Comment: The dermal graft should be kept in mind for filling out subcutaneous defects, especially about the scalp and forehead, face, chin, and any other part of the body that is exposed. The graft must be placed accurately and fixed to secure a good result.

INTERNAL MEDICINE

Edited by Hugh Jeter, M.D., 1200 North Walker, Oklahoma City

Protamine-Zinc-Insulin in Diabetes. By E. Perry McCullagh, M.D., Cleveland, Ohio. (Annals of Internal Medicine, May, 1938, Vol. 11, No. 11).

In this the author draws several practical conclusions which appear to be in line with the reported experiences of most present day students of diabetes mellitus. Some of the conclusions are as follows: "It is a remarkable fact that with the use of protamine and protamine-zinc-insulin, the blood sugar level may reach 40 mg. per hundred cubic centimeters or below without reactions. Reactions do occur, however, but for the most part they tend to be mild and gradual in their onset, thus allowing more time for treatment."

Protamine-zinc-insulin in common dosage appears to be active for 50 to 65 hours after injection, but the maximum effect is ordinarily from 12 to 18 hours. In some mild cases a dose of protamine-zince-insulin every second or third day may be sufficient to control fasting sugar levels.

The most obvious advantage of protamine-zinc-insulin is the reduction in the number of doses necessary.

Editorial by H.M.T., Jr., Protamine Insulin and Diet in Diabetes Mellitus. (Annals of Internal Medicine, May, 1938, Vol. 11, No. 11).

In this the recent trend in theory and practice in connection with the treatment of diabetes are nicely discussed. Some of the more critical physicians interested in diabetes mellitus say they have never seen a patient "regulated" on one daily dose of protamine-zinc-insulin.

Doubt as to the correctness of Mosenthols belief that the damage done to the patient with diabetes mellitus occurs not from the abnormally high level of blood sugar, but rather from the long continuous effects of glycosuria with its attendant polyuria, is questioned. It is impossible to say at present whether hyperglycemia and glycosuria are harmful if in other respects the sugar metabolism in the body is essentially normal. We can say that severe insulin shocks and possibly repeated mild attacks of hypoglycemia are harmful and in the face of arteriosclerotic coronary or cerebral arteries are actually dangerous.

The high protein diets as used in various clinics are discussed. Dietary adjustment and exercise are considered important factors in the satisfactory management of the diabetic.

"Moderate variations in blood sugar levels are unimportant and extreme ones make themselves evident to the watchful patient in a way that enables him to change his single dose of insulin or his diet to suit the situation. It has been shown that excellent regulation with protamine insulin can be obtained by proper dietary adjustment of an adequately high carbohydrate intake. The patient not only is happier and feels much better on this than on any other regimen but also the metabolic processes more nearly approach normal."

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D., F.A.C.S.
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Stenosing Tendovaginitis at the Radial Styloid Process, Harold Brown Keyes, Annals of Surg., April, 1938, Vol. 107, No. 4.

Stenosing tendovaginitis at the radial styloid, or DeQuervain's disease, is a condition which is not of infrequent occurrence and is not universally recognized, although it was first described in 1895. The author has seen two such cases within six months. Upon reviewing the literature he found relatively few cases described. DeQuervain describes it as follows: "It is a condition affecting the tendon sheath of the abductor pollicis longus, and the extensor pollicis brevis. It has definite symptoms and signs. The condition may affect other extensor tendons at the wrist."

It is known that the tendons of the abductor longus pollicis, and the extensor brevis pollicis, pass through a groove in the outer aspect of the styloid of the radius, and are contained in a separate compartment of the annular ligaments. A tendon sheath surrounds them, about an inch above, and below, the carpal ligament. This sheath is filled with synovial fluid.

The etiologic factors include (1) chronic injury, which is the most common type, and (2) a few cases of acute injury. Chronic injury is described as being of a type where one is required to work constantly repeating motion at the wrist, especially in ulnar abduction, with the thumb fixed on some object. The muscles become taut as they pass over the styloid process of the radius, and press on the tendon sheath. This also stretches the entire tendon sheath, with this motion.

The pathology consists chiefly of a fibrosis of the common sheath with a definite thickness. Sometimes it develops even to a cartilagenous-like consistency.

The characteristic findings consist of pain, which is usually directly over the styloid process of the radius, and is continuous, accentuated by motion, and radiates up the arm. It may even interfere with sleep. The anatomical "snuffbox" on the distal end of the forearm gradually disappears and eventually the area around the base of the thumb suggests atrophy of disuse. There may be a bulbous swelling in the region of the styloid of the radius. Point pressure directly over the styloid invariably causes the patient to wince. On grasping the hand and quickly adducting the thumb, a sharp pain occurs referred to the styloid process of the radius.

This condition must be differentiated from tuberculous tendovaginitis, tuberculous osteitis, tendovaginitis crepitans, periostitis, neuritis, arthritis of either gouty, rheumatic, gonorrheal or syphilitic origin, or fracture of the navicular bone.

Treatment is divided into conservative and operative methods. Conservative method consists of immobilization in the form of plaster cast holding the thumb at rest, or heat, massage and diathermy. This is not considered the ideal treatment, except possibly acute cases. The treatment of choice is that of operation, in which a small incision is made over the styloid of the radius and the tendon sheath is divided longitudinally, to permit the constricted tendon to expand to normal shape and to permit the tendon to slide back and forth normally. It is said to be remarkable how soon the pain disappears and the patient can resume normal function of the thumb.

Internal Fixation for Recent Fractures of the Neck of the Femur. Melvin S. Henderson. Annals of Surg. VCII, 132, January, 1938.

In a rather complete review of the subject, the author states that experience at the Mayo Clinic has showed that the risk of operative treatment is no greater than that of conservative treatment, provided operation is performed ten days or longer after injury.

Operative treatment promises a better chance for a good result than conservative treatment.

The author applies traction to the extremity immediately after the injury as preliminary treatment before operation. Pain is controlled by traction and by administration of opiates.

The operative treatment eliminates the need of prolonged confinement in a plaster spica and obviates the sequelae of stiff knees and hips.

The author reviews the various methods of internal fixation, the development of the cannulated nail and leg screw, and points out the technical difficulties of the operation and the importance of roentgenographic control with anteroposterior and lateral views. He describes in considerable detail the lag screw developed at the Mayo Clinic and compares its relative merits with the Smith-Petersen nail.

Fourteen days after the operation, motion of the hip and knee can be safely started. This is carried out by means of an overhead suspension apparatus which can be operated by the patient. Union

cannot be expected under 90 days. Weight-bearing must be delayed for at least six months.

Henderson next discusses the results in 14 cases operated on more than a year ago in which the condition of the patients is known. Bony union and excellent function were obtained in 86 per cent of the cases. No serious infection occurred. Drainage followed late in two cases. There were no deaths from operation, and convalescence was much more satisfactory than by the conservative method.

UROLOGY

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"I Was Rejuvenated," Liberty Magazine, June 18, 1938.

The only reason for comment on this article is that thousands of gullible people will read it and accept the information given as based on scientific facts. The article details the marvelous physical, mental and sexual invigoration noted by a senile individual following a vasectomy. No medical men believe now, that vasectomy, or the Steinach operation, is followed by anything more than permanent sterility, and that such improvement in general well-being that is noted is due to nothing more than suggestive therapy in a susceptible individual.

Quackery and charlantism will make profitable capital of such publicity with the ultimate result only of disappointment to the patients exploited.

"Observation on Impotence and Sterility Following Prostatectomy," Wilbur H. Haines, B.S., M.D. The Urologic and Cutaneous Review, May, 1938.

The author studied 75 patients who had undergone prostatectomy for prostatic hypertrophy in an attempt to determine whether the operation was followed by impotence or whether sterility results.

His conclusions were: 1. If potency exists prior to operation, its preservation following an otherwise successful operation may be assured 100 per cent. In some instances it may appear to be actually restored. Frequently it appears reinforced. 2. Fertility may be but seldom is preserved due largely to impairment of the mechanics of ejaculation, resulting in a blank. 3. The ecstatic climax is always present and occasionally prolonged.

"Lesions of the Urinary Tract Producing the Symptoms of Intra-Abdominal Disease." Richard Chute and Sylvester B. Kelley. Journal of Urology, May, 1938.

This article was prompted by the fact that various diseases of the urinary tract may masquerade as an intra-peritoneal lesion and unless the urinary tract is specifically studied an error in diagnosis will result.

The authors cite the report of Cecil where he found 19 per cent of calculus in the urinary tract and 30 per cent of hydronephroses had undergone abdominal operation for something else such as appendix or gall bladder, without relief of symptoms.

They state that ureteral calculus is the most frequent condition simulating intraperitoneal lesions, however, tumors, horseshoe kidney, duplication of the ureter with infection, and hydronephrosis will produce abdominal signs and symptoms. Case histories illustrating are presented.

In their conclusion they emphasize tnat the urinary tract should be continually kept in mind when the surgeon is confronted with a case presenting abdominal symptoms. Even an urinalysis and X-ray is not sufficient to clarify the diagnosis as often these are negative. They recommend the use of intravenous urography and even further urological study where puzzling abdominal symptoms are met with.

Comment: Mistakes in diagnosis which result in ill advised surgical procedures are not as common now as a few years past. Doubtless this is due to the technical aids which the careful surgeon will utilize when he doubts his diagnosis. Because a complete investigation and especially a urological examination is relatively expensive we are prone in those patients who, financially, are not well situated to omit such an examination, however, it must be continually borne in mind on the part of both the patient and doctor that a useless surgical procedure far outweighs the trivial cost of a complete diagnosis. No patient in the hope of saving a bit of money should run the serious risk of an unnecessary surgical procedure as also the surgeon should not hazard a blow to his professional prestige by performing an ill advised operation.

Thrombosis of Axillary Vein: Report of Five Cases With Comments on Etiology, Pathology and Diagnosis

Theodore Kaplan, New York (Journal A. M. A., June 18, 1938), cites five cases of thrombosis of the axillary vein in males. At the time that this process developed the patients were in good health and showed no pathologic defects to account for such a condition. The diagnosis of primary axillary thrombosis is made on the following symptoms and signs: (1) swelling of the arm and cyanosis within several hours or days after the accident, injury by strain or, occasionally, without any cause, (2) the absence of a rise in body temperature and absence of signs of local active inflammation, (3) the presence of dilated superficial veins on the affected arm and over the anterior part of the chest and also in the axilla, (4) the delay or absence in the collapse of the superficial veins of the upper extremity when the latter is raised above the level of the heart, (5) the presence of a cord in the axilla, (6) the increase of the venous pressure in the affected extremity, (7) prolongation of the circulation time in the affected arm, (8) X-ray visualization of new collateral formation, enlargement and dilatation of the veins, evidence of stasis on injection of radiopaque dyes into the veins of the affecte arm and the failure of the axillary vein to be visualized and (9) the presence of numerous superficial veins on the affected side as shown by photography with the infra-red technic. Prognosis as to life is good. The duration of the disability is variable. Recurrences are occasionally noted following exertion. In the acute stage the treatment consists of rest, elevation and hot moist packs locally. If there is residual edema, an elastic bandage may be applied spirally, beginning at the hand an dextending upward to the shoulder. Diathermy is of value in reducing the swelling. Excision of the thrombus or the entire segment of the thrombosed vein has been recommended. However, such procedures are questionable, since after removal of the thrombus recurrence is likely, and if the venous segment is resected the chance for canalization of the organized thrombus is lost.

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